

AIRDROP OF SUPPLIES AND EQUIPMENT:

RIGGING MOTORCYCLES AND QUAD-RUNNERS



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CHANGE
NO 1

Headquarters
Department of the Army
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Washington, DC, 1 January 2001

Airdrop of Supplies and Equipment: Rigging Motorcycles and Quad-Runners

This change adds the procedures for rigging the 250- to 300-cubic centimeter Kawasaki or equivalent motorcycles and the 350-cubic centimeter Yamaha four-wheeled quad-runner on a combat expendable platform for low-velocity airdrop.

FM 10-500-77/TO 13C7-55-1, 1 February 2000, is changed as follows:

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i-iii

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Glossary-1

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1-0

4-1 through 4-18

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Airdrop of Supplies and Equipment: Rigging Motorcycles and Quad-Runners

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Preface

Scope

This manual is designed for use by all parachute riggers. This manual shows and tells how to prepare and rig one or two 250- to 300-cubic centimeter Kawasaki or equivalent motorcycles and the 350-cubic centimeter Yamaha four wheeled quad-runner on a combat-expendable platform. They are rigged for low-velocity airdrop from a C-130, C-141, or C-17 aircraft.

User Information

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Chapter 1

Introduction

DESCRIPTION OF ITEMS

1-1. The description of the items covered in this manual is given below:

- Each motorcycle is 32 inches wide, 49 inches high, and 88 inches long. They each weigh 275 pounds.
- The four wheeled quad-runner is 45 inches wide, 65 inches high, 72 inches long and weighs 550 pounds.

SPECIAL CONSIDERATIONS

1-2. Special considerations for this manual are described below.

- The loads covered in this manual may include hazardous materials as defined in AFJMAN 24-204/TM 38-250. If hazardous materials are included, they must be packaged, marked, and labeled as required by AFJMAN 24-204/TM 38-250.
- A copy of this manual must be available to the joint airdrop inspectors during the before-and after-loading inspections.

Chapter 2

Rigging One Motorcycle For Low-Velocity Airdrop

DESCRIPTION OF LOAD

2-1. The motorcycle is rigged on a 32- by 88-inch Combat Expendable Platform (CEP) with one G-14, or T-10C cargo parachute. The load is rigged for a low-velocity, over the ramp airdrop from a C-130, C-141 or C-17 aircraft.

BUILDING AND PREPARING COMBAT EXPENDABLE PLATFORM

2-2. Build a 32 by 88 inch CEP as shown in Figure 2-1.

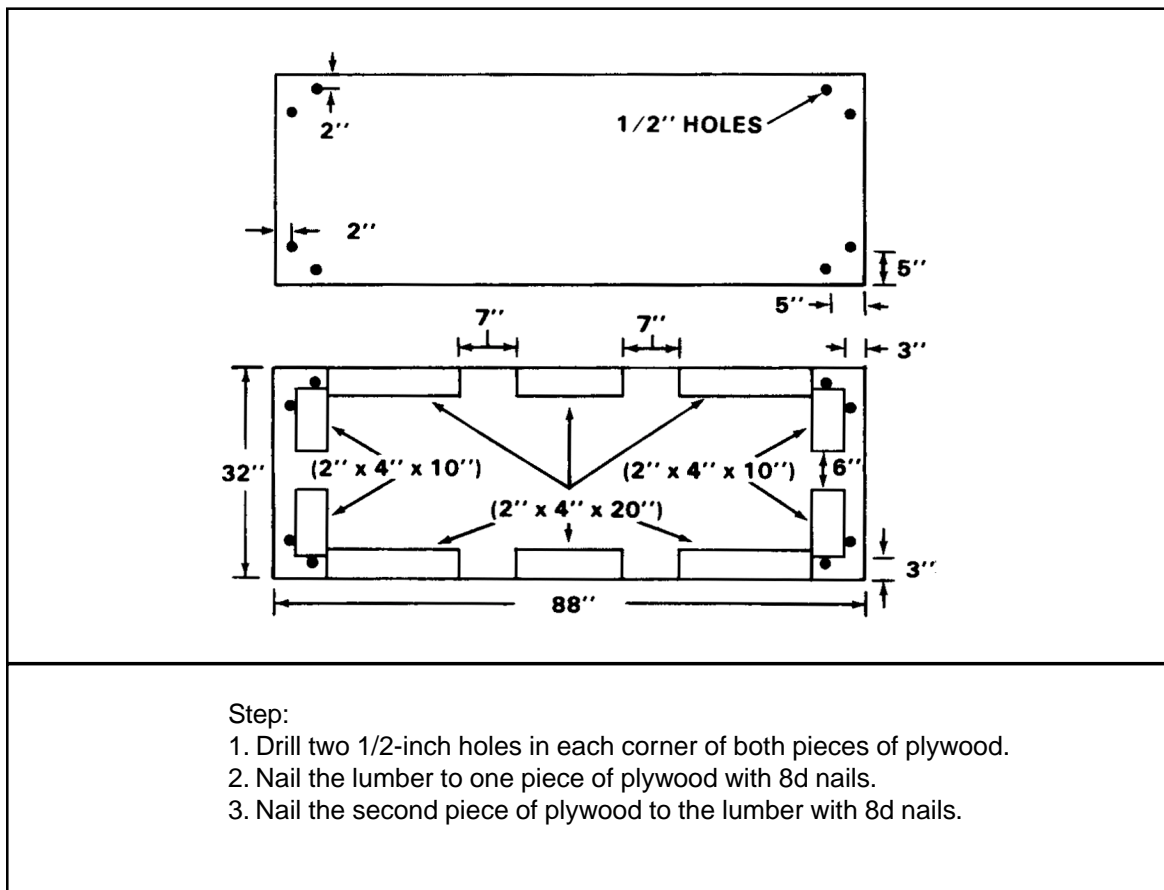


Figure 2-1. Construction Detail for Platform

- Prepare the platform as shown in Figure 2-2.
- Build a honeycomb stack and position it on the platform as shown in Figure 2-3.

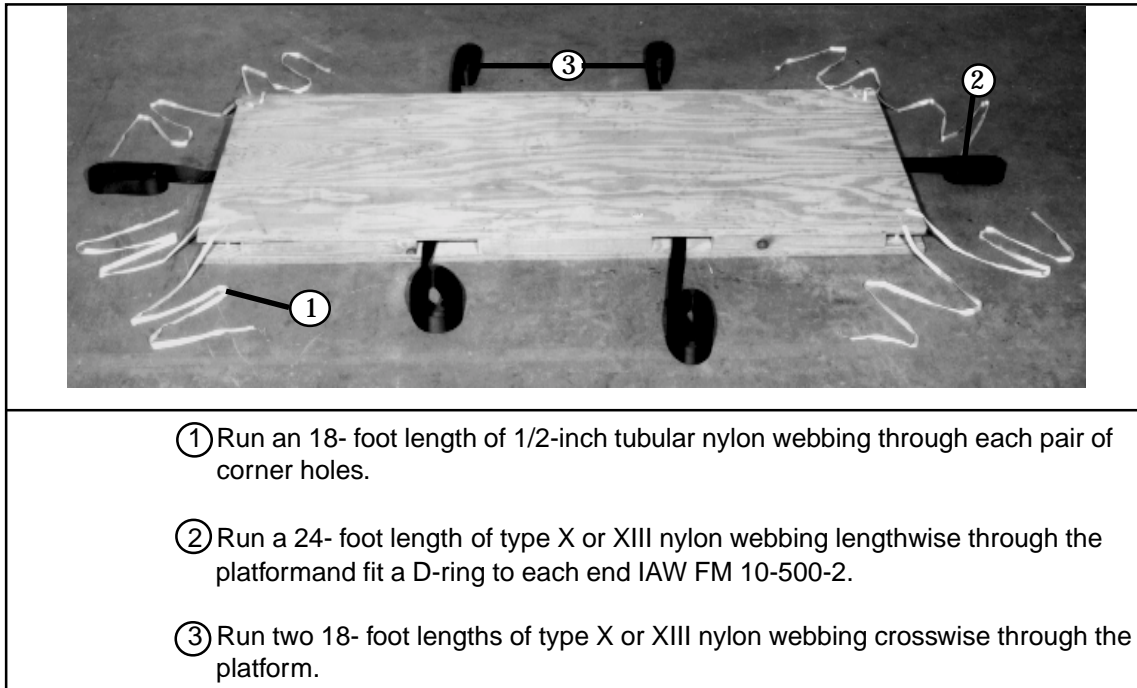


Figure 2-2. Platform Prepared

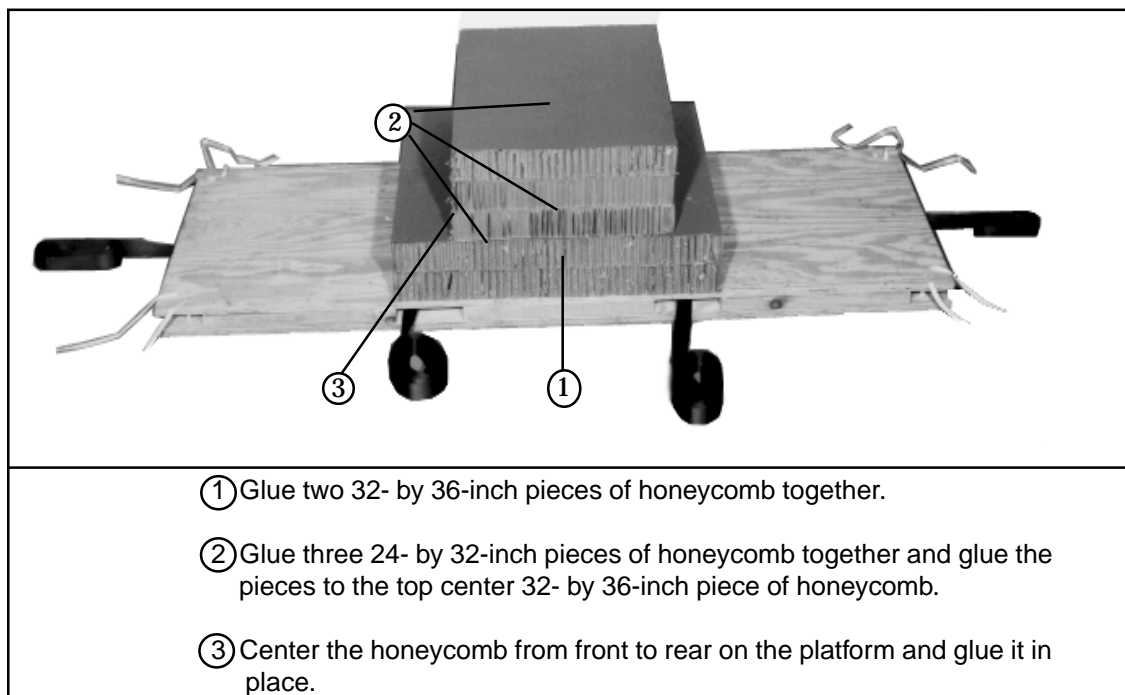


Figure 2-3. Honeycomb Stack Placed on Platform

PREPARING, POSITIONING, PROTECTING, AND SECURING MOTORCYCLE

2-3. Prepare and position the motorcycle on the platform as shown in Figure 2-4.

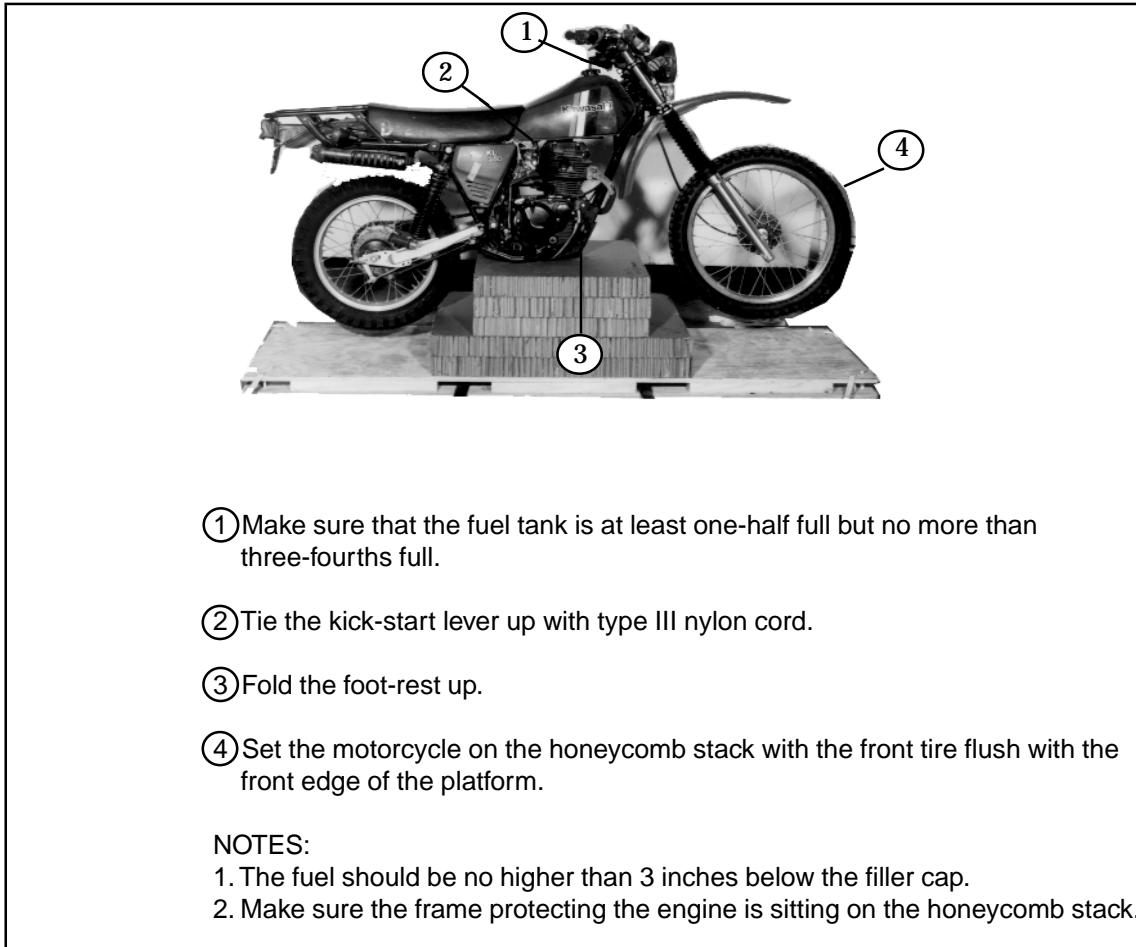
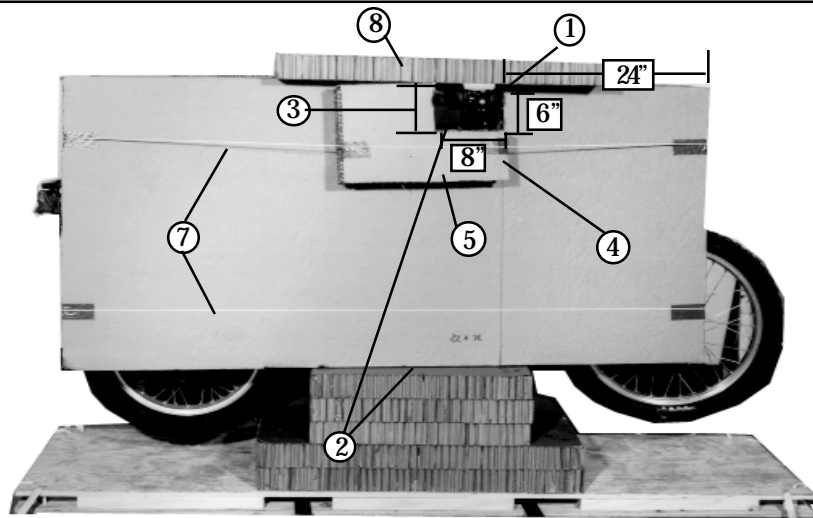


Figure 2-4. Motorcycle Prepared and Placed on Honeycomb

- Tie honeycomb protectors to the motorcycle as shown in Figure 2-5.
- Secure the motorcycle to the platform as shown in Figures 2-6 through 2-7.



- ① Make a 6- by 8-inch cutout in the 72 inch edge of a 36- by 72-inch piece of honeycomb, 24 inches from the front edge.
- ② Set the protector on the right side of the motorcycle. Rest the bottom edge of the protector on the honeycomb stack. Align the cutout with the handlebar.
- ③ Cut a 6- by 8-inch piece of honeycomb from a corner of two 12- by 18- inch pieces of honeycomb per side.
- ④ Align the cutouts (protector) and glue the pieces together.
- ⑤ Place the 12- by 18-inch pieces of honeycomb to the rear of the cutouts.
- ⑥ Repeat steps 2 through 5 and set a second protector on the left side of the motorcycle (not shown).
- ⑦ Tie the protectors in place with lengths of type III nylon cord. Use tape on the protectors to keep the cord from cutting the protectors.
- ⑧ Lay a 32- by 36-inch piece of honeycomb on the protectors so that the 36-inch side of the honeycomb is parallel with the long side of the platform.

Figure 2-5. Honeycomb Protectors Prepared and Tied to Motorcycle

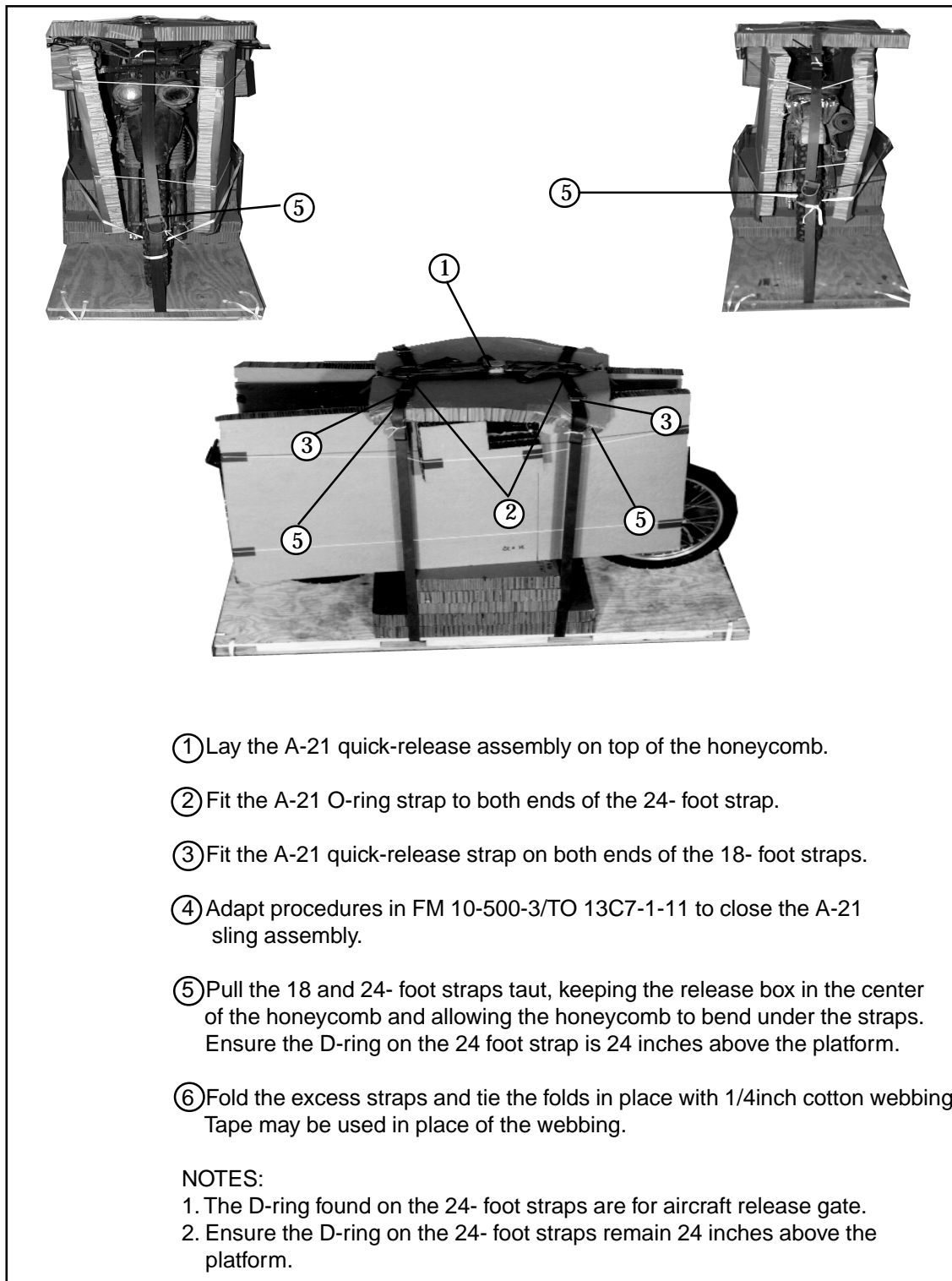


Figure 2-6. Motorcycle Secured to Platform

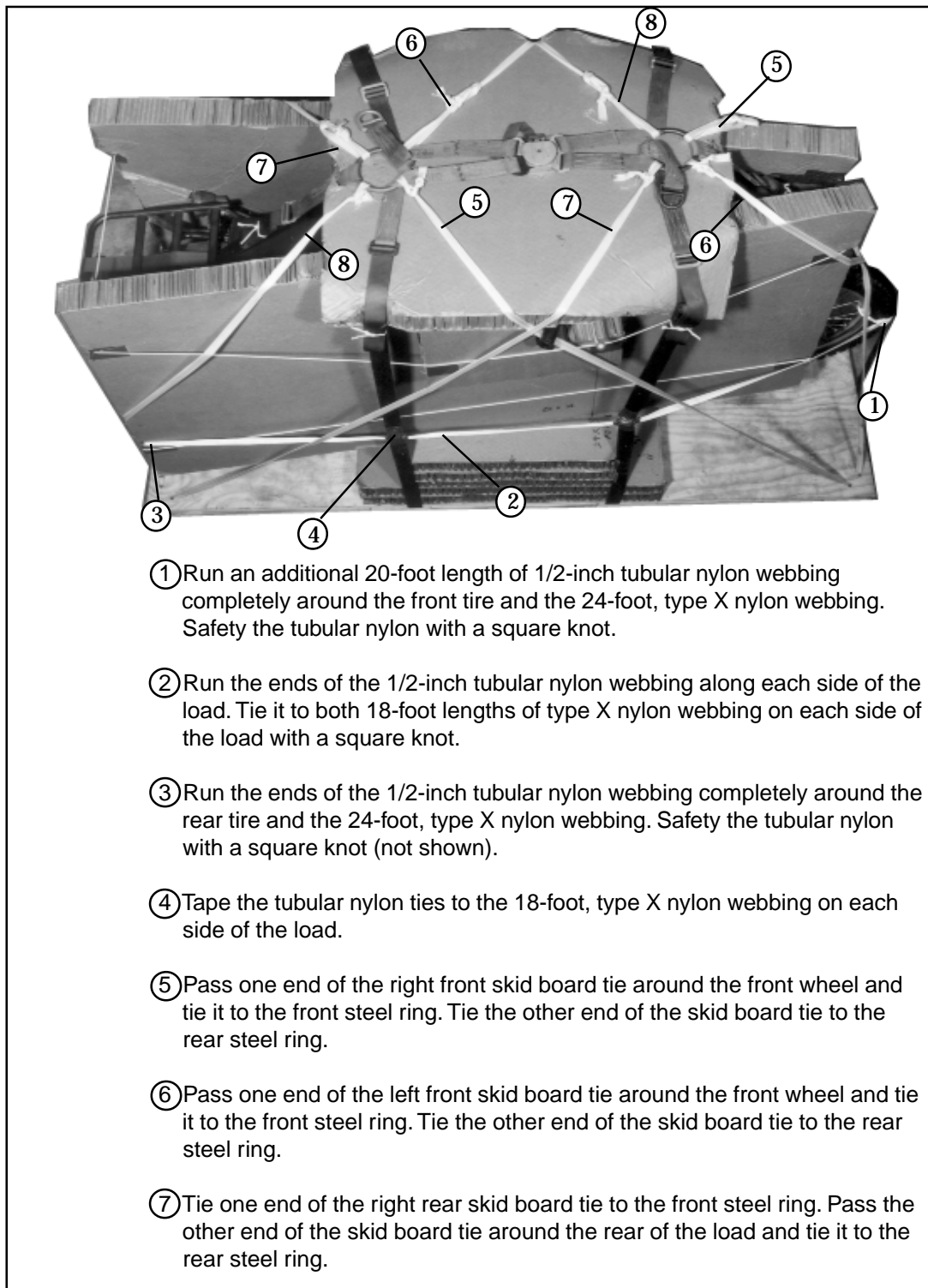


Figure 2-7. Nylon Webbing Tied to Steel Rings

- ⑧ Tie one end of the left rear skid board tie to the front steel ring. Pass the other end of the skid board tie around the rear of the load and tie it to the rear steel ring.

Figure 2-7. Nylon Webbing Tied to Steel Rings (Continued)

STOWING CARGO PARACHUTES

2-4. Select either a G-14 or T-10C cargo parachute. Attach a G-14 or T-10 cargo parachute to the load according to FM 10-500-3/TO 13C7-1-11. Secure the parachute to the load as shown in Figure 2-8.

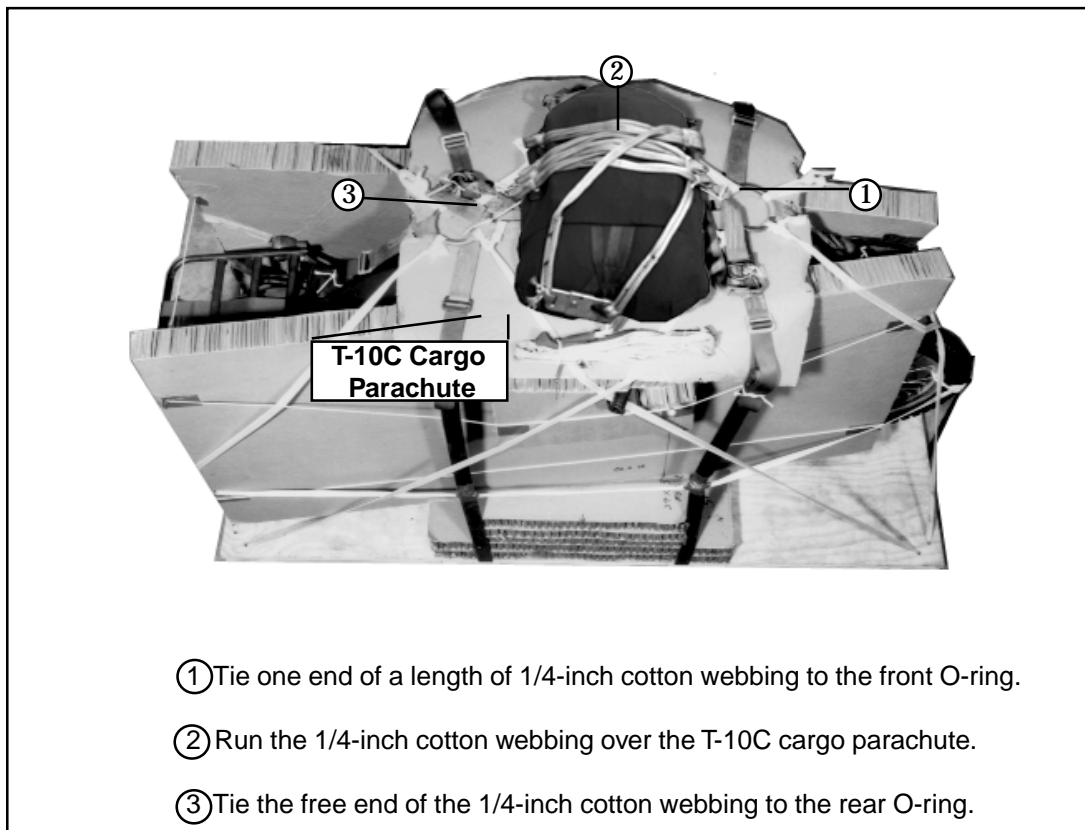


Figure 2-8. Parachute Stowed on Motorcycle Rigged for a Low-Velocity Airdrop

MARKING RIGGED LOAD

2-5. Complete Shipper's Declaration for Dangerous Goods and securely attach it to the load as shown in Figure 2-9. Indicate on the form that the fuel tank has been prepared in accordance with AFJMAN 24-204/TM 38-250. If the load varies, the weight, height, and parachute requirements must be recomputed.

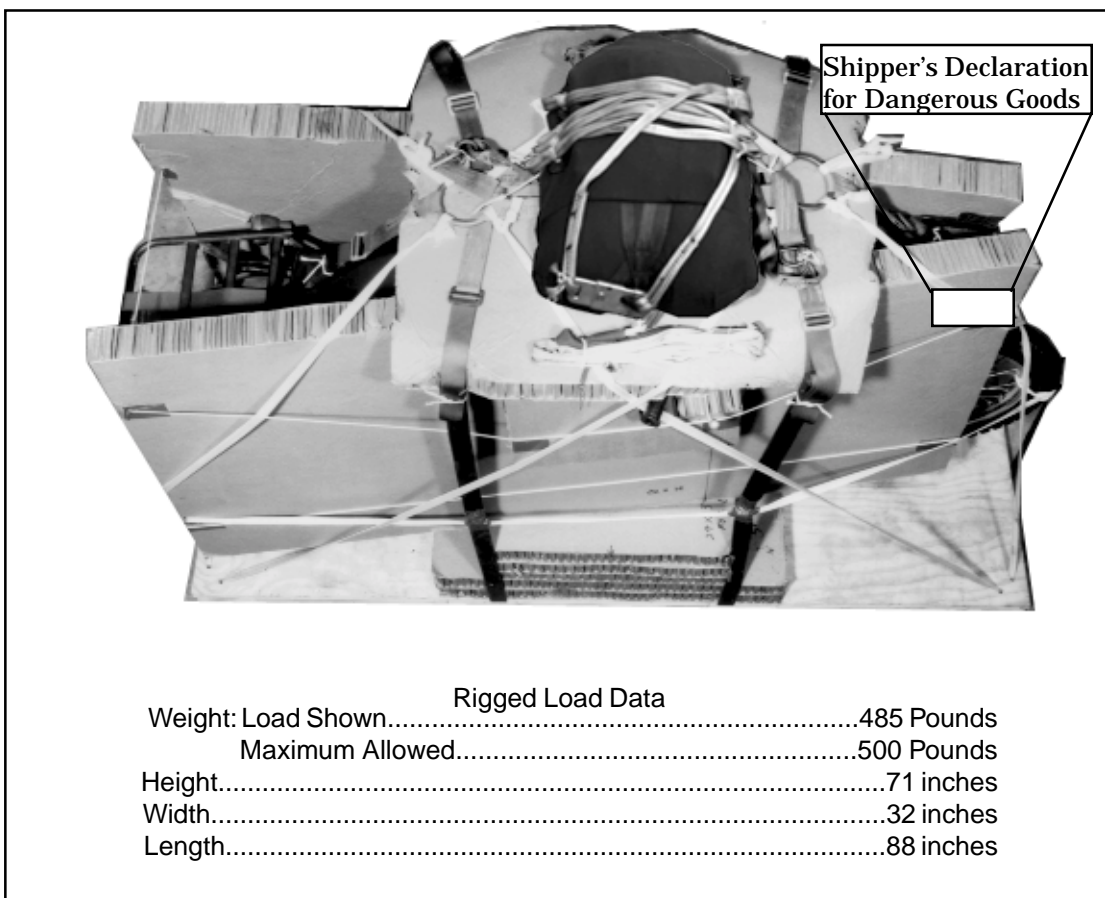


Figure 2-9. Motorcycle Rigged for Low-Velocity Airdrop

EQUIPMENT REQUIRED

2-6. The equipment needed to prepare and rig this load is listed in Table 2-1.

Table 2-1. Equipment Required for Rigging One Motorcycle for Low-Velocity Airdrop

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive Paste, 1-gal	As Required
5510-00-220-6146	Lumber:	
	2- by 4- by 10-inches	4
	2- by 4- by 20-inches	6
5315-00-010-4659	Nail, Steel Wire, Common, 8d	As Required
1670-00-753-3928	Pad, Energy-Dissipating Honeycomb,	
	3- by 36- by 96-inches	3 Sheets
	12- by 18-inch	(4)
	24- by 32-inch	(3)
	32- by 36-inch	(3)
	36- by 72-inch	(2)
	Parachute Cargo:	
1670-00-999-2658	G-14 or	1
No NSN	T-10C	1
5530-00-128-4981	Plywood, 3/4- by 32- by 88-inch	2
1670-00-242-9173	A-21 Cargo Bag	1
	Strap:	
7510-00-266-5016	Tape, Adhesive, 2-inch	As Required
1670-00-568-3223	Retainer Band	As Required
	Webbing:	
8305-00-268-2411	Cotton, 80-lb	As Required
8305-00-268-2453	Nylon, Tubular, 1/2-inch, 1,000-lb	As Required
8305-00-261-8584	Nylon, Type X or	As Required
8305-00-260-4586	Nylon, Type XIII	As Required
5365-00-937-0147	D-Ring	2

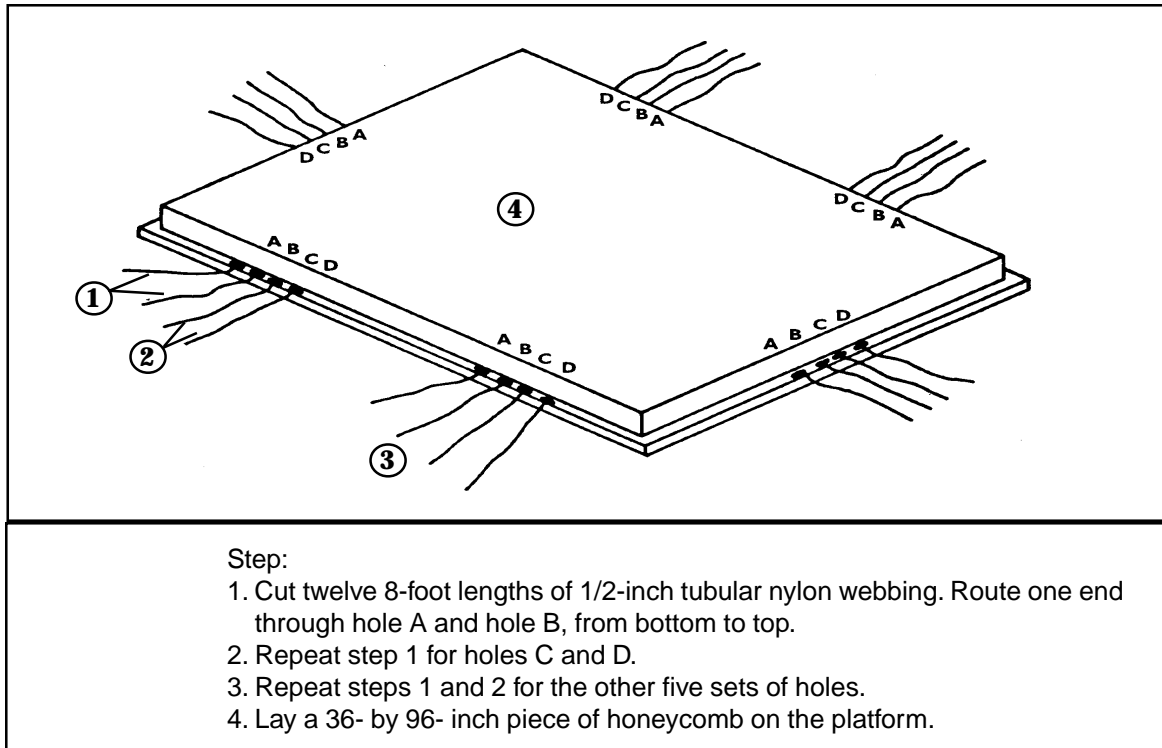


Figure 3-1a. Construction Detail for Platform

POSITIONING AND JOINING A-22 SLING ASSEMBLIES

3-3. Lay two A-22 cargo bag sling assemblies on the platform as shown in Figure 3-2, and join them together as shown in Figure 3-3.

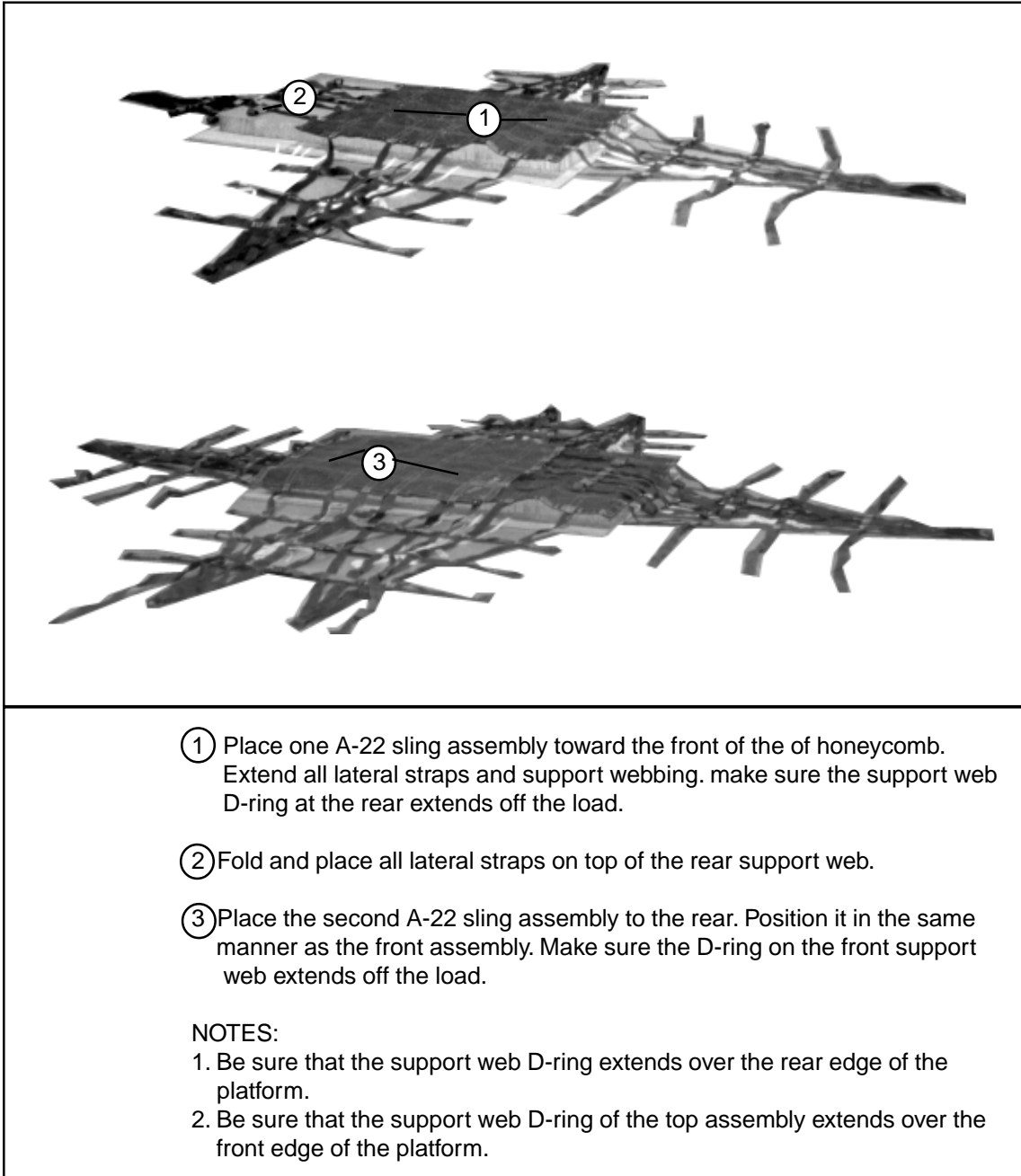


Figure 3-2. A-22 Sling Assemblies Placed on the Platform

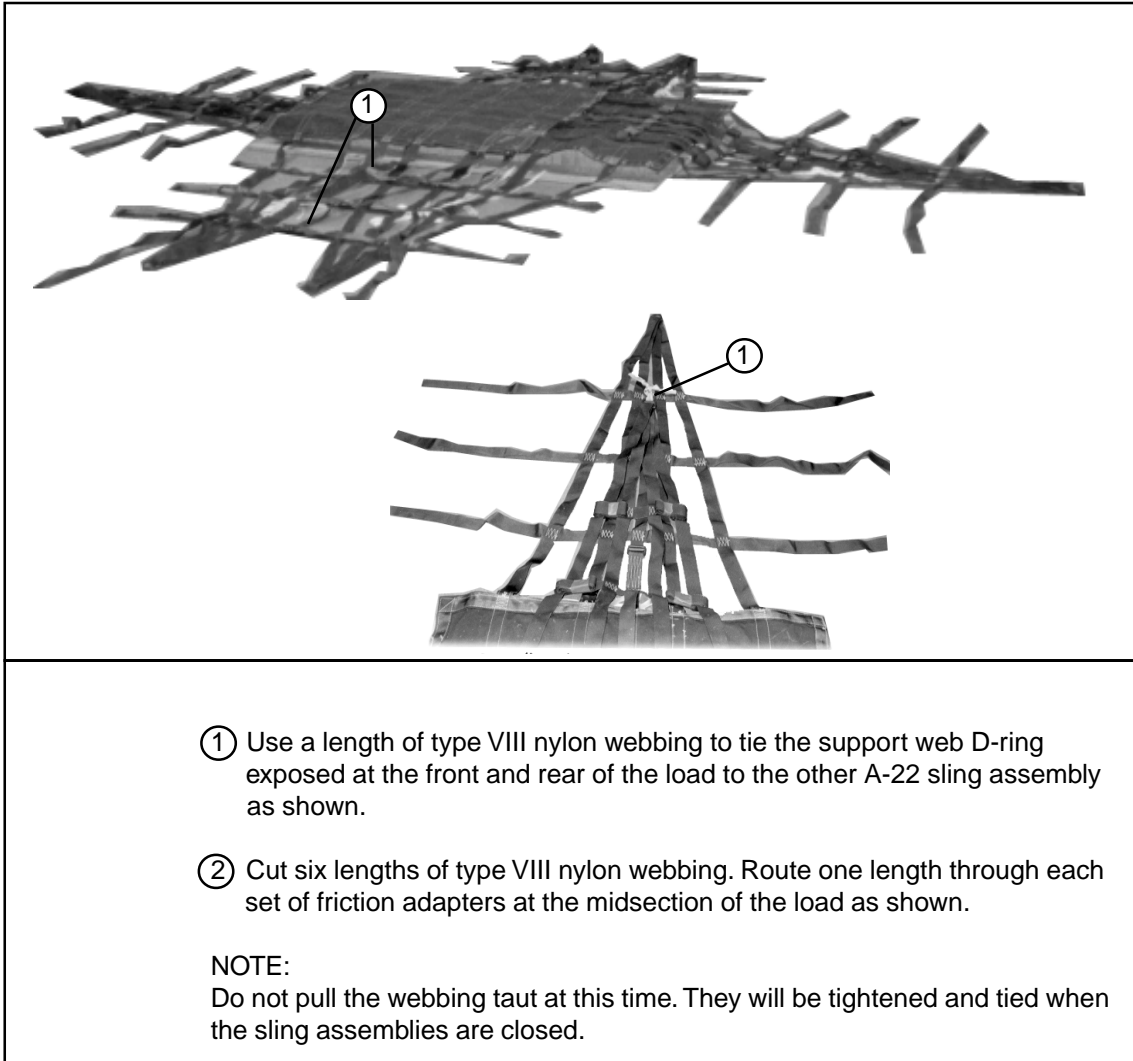


Figure 3-3. A-22 Sling Assemblies Joined

POSITIONING A-22 CARGO COVERS AND HONEYCOMB

3-4. Lay two A-22 cargo bag covers on the sling assemblies. Set the honeycomb on the covers as shown in Figure 3-4.

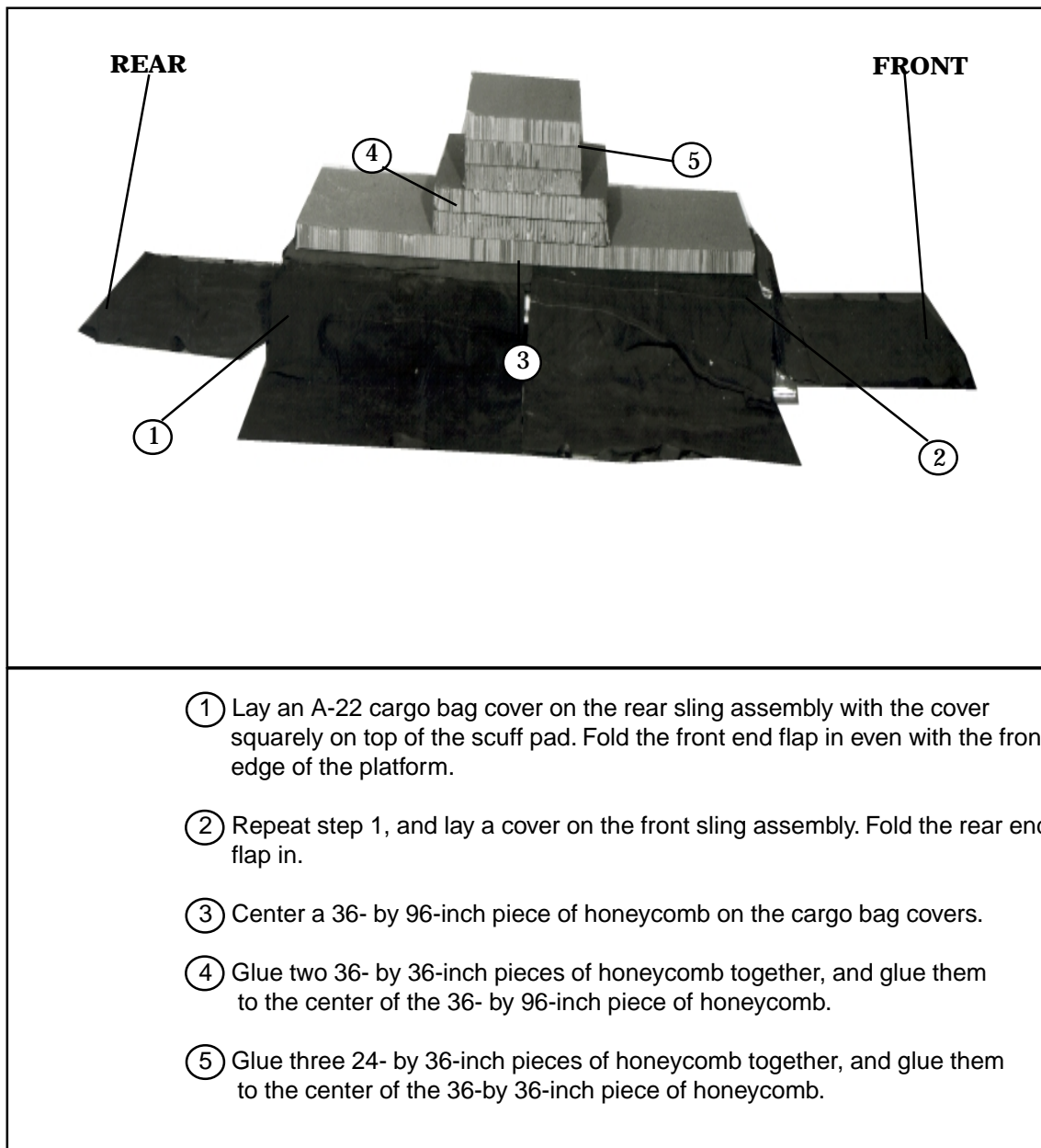


Figure 3-4. Cargo Covers and Honeycomb Positioned on Platform

PREPARING, POSITIONING AND PROTECTING MOTORCYCLES

3-5. Prepare the two motorcycles as outlined in Chapter 2. Set them on the honeycomb as shown in Figure 3-5.

- Tie honeycomb protectors to the motorcycles as shown in Figure 3-6.

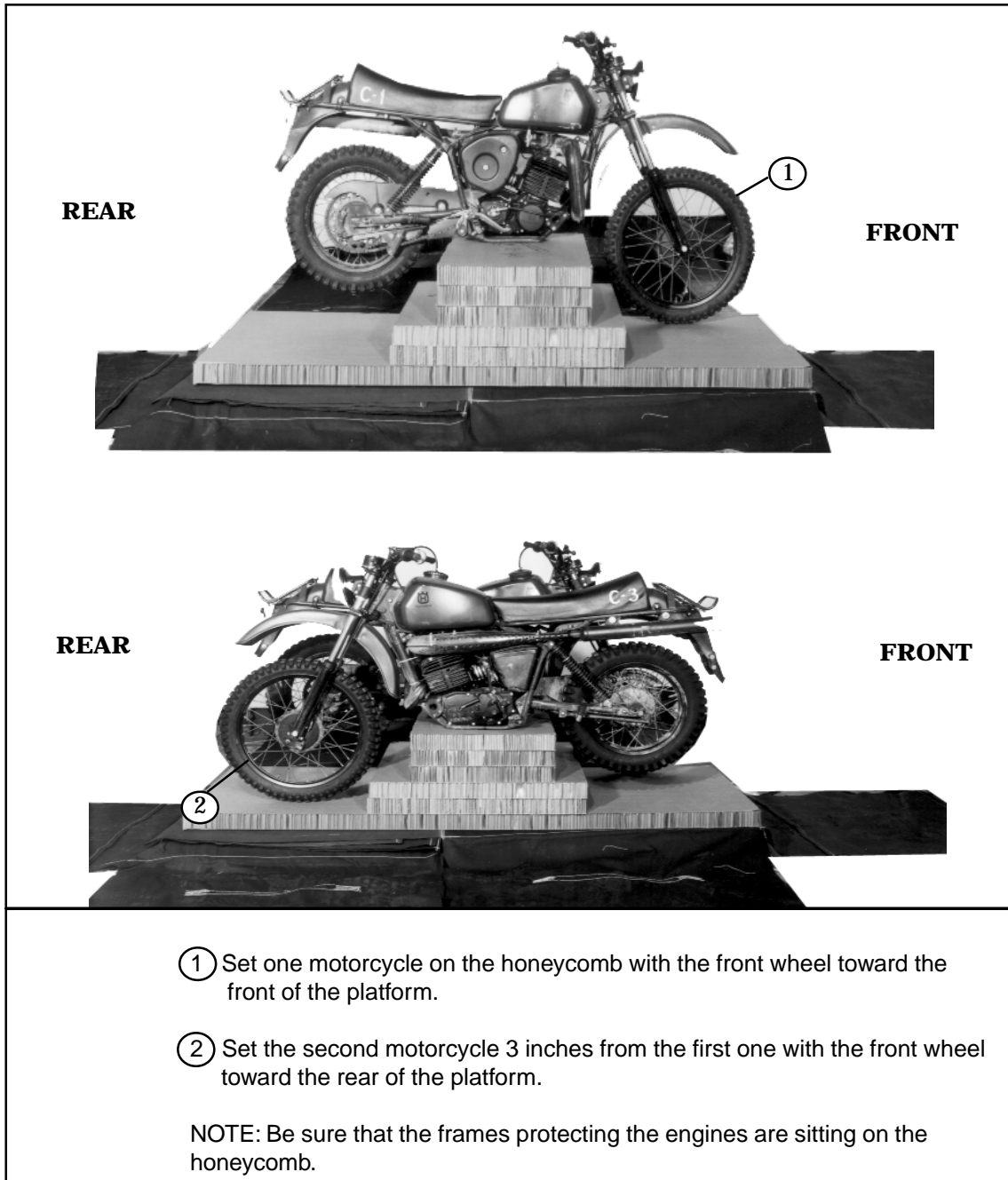


Figure 3-5. Motorcycles Placed on Honeycomb

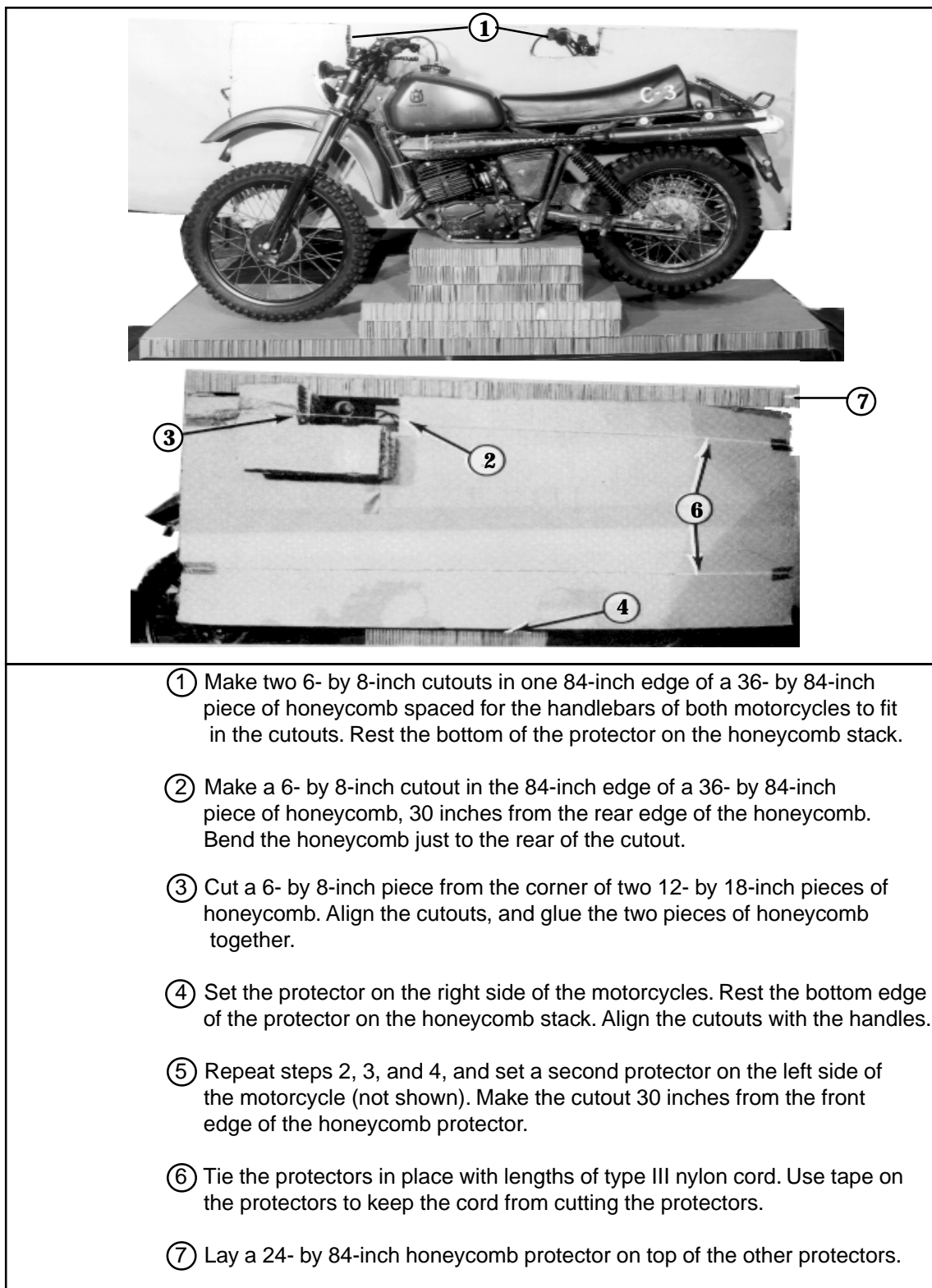


Figure 3-6. Honeycomb Protectors Prepared and Tied to Motorcycles

CLOSING CARGO BAG

3-6. Close the A-22 cargo bags as outlined in FM 10-500-3/TO 13C7-1-11 and with the exceptions shown in Figures 3-7 through 3-10.

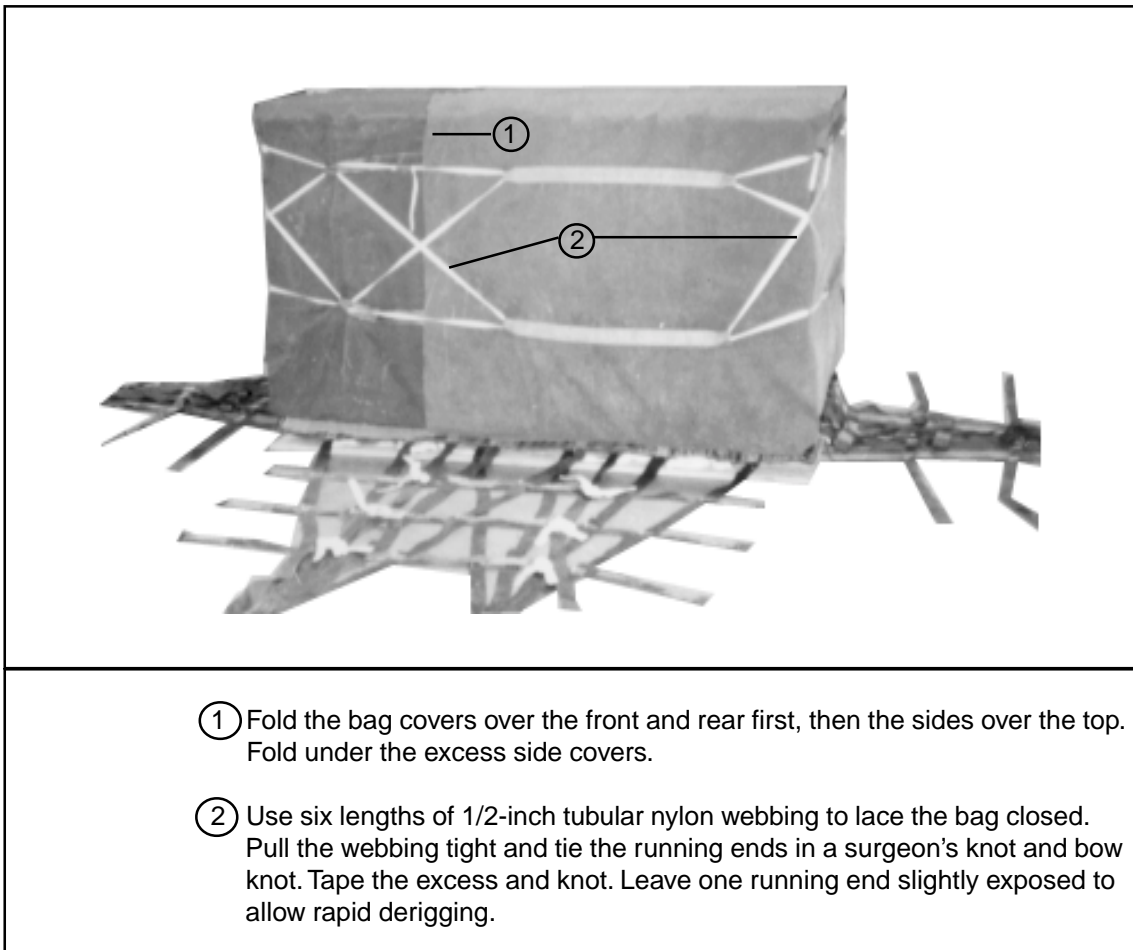


Figure 3-7. Cargo Bags Closed

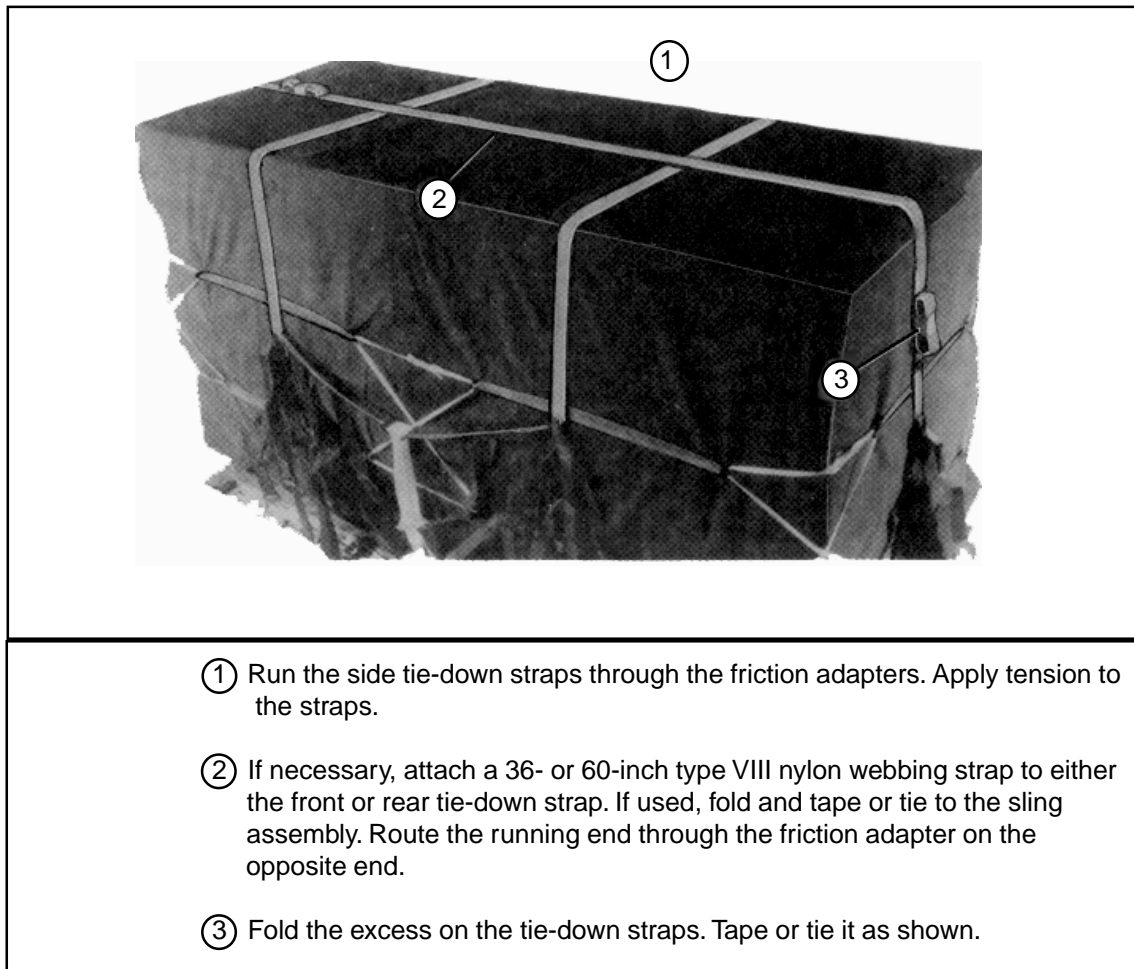
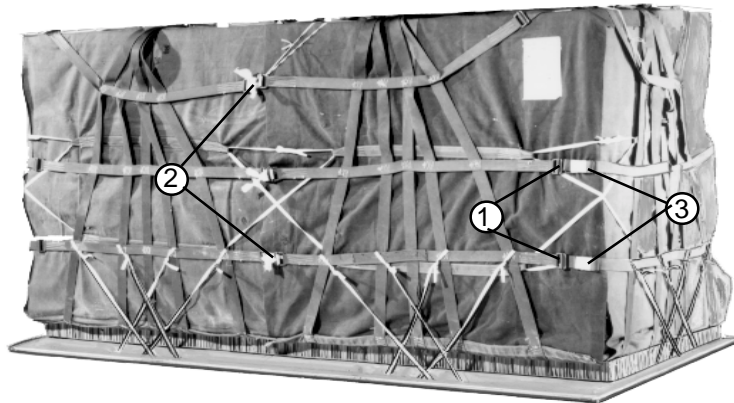


Figure 3-8. Cargo Bags Tie-down Straps Secured



- ① Lay the remaining portions of the sling assemblies over the load. Route the lateral straps through the friction adapters.
- ② Tighten the center friction adapters and type VIII nylon webbing so that the middle suspension web on each container is vertical. Install a knot in the running ends of the type VIII nylon webbing about 3 inches from the friction adapters.
- ③ Apply equal tension on the remaining lateral straps. Fold the excess and tape or tie it in place as shown.

NOTE:

If top lateral straps are on the top of the load, make sure they are tightened loosely.

Figure 3-9. Cargo Bags Lateral Straps Secured

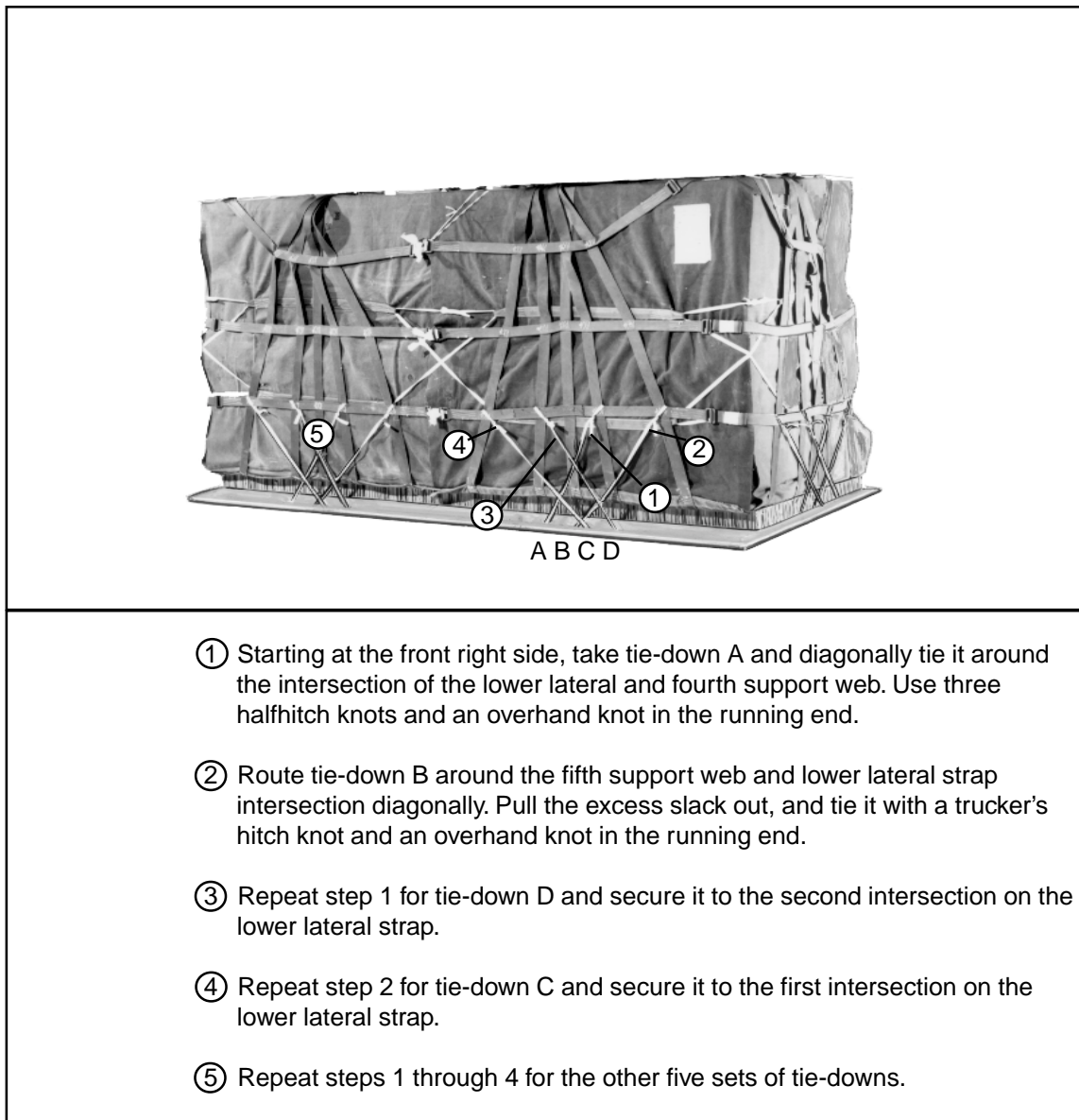


Figure 3-10. Skid Board Ties Secured

ATTACHING SUSPENSION SLINGS

3-7. Fit a suspension web to each support web D-ring. Fit two 3-foot slings to the suspension webs as shown in Figure 3-11.

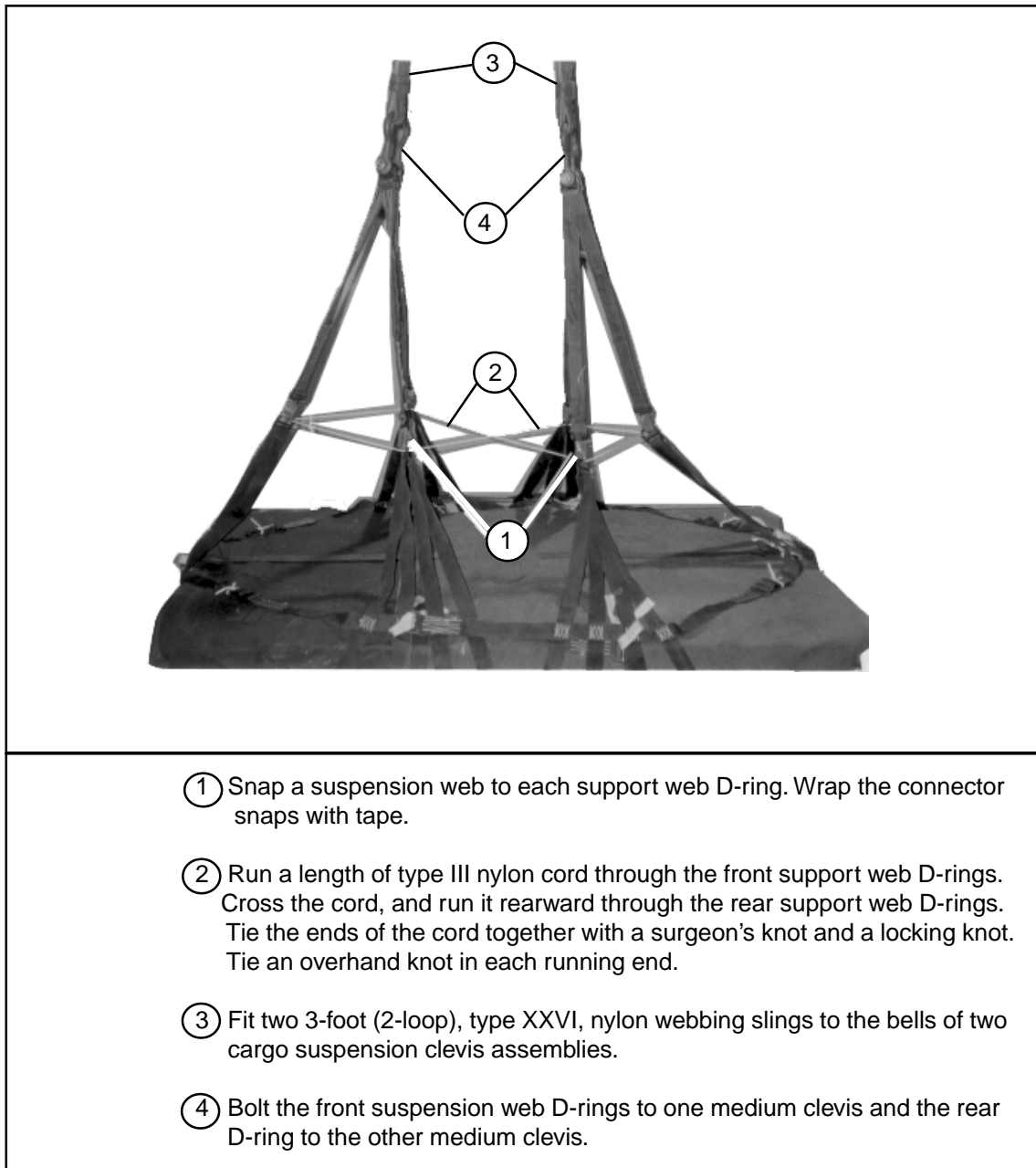


Figure 3-11. Suspension Slings Installed

PACKING A 15-FOOT CARGO EXTRACTION PARACHUTE

3-8. Pack a 15-foot cargo extraction parachute as shown in Figures 3-12 through 3-17 using the following items:

- One T-10 deployment bag with static line.
- Retainer bands.
- 1/4 inch cotton webbing.
- Ticket number 5 cotton thread.
- Two medium cargo suspension clevises.
- For parachute with a 36-inch adapter web: One 9-foot (2-loop), type XXVI, nylon sling and one type IV connector link.
- For parachute without a 36-inch adapter web: One 12-foot (2-loop), type XXVI, nylon sling and one 60-inch nylon webbing strap (shear strap).

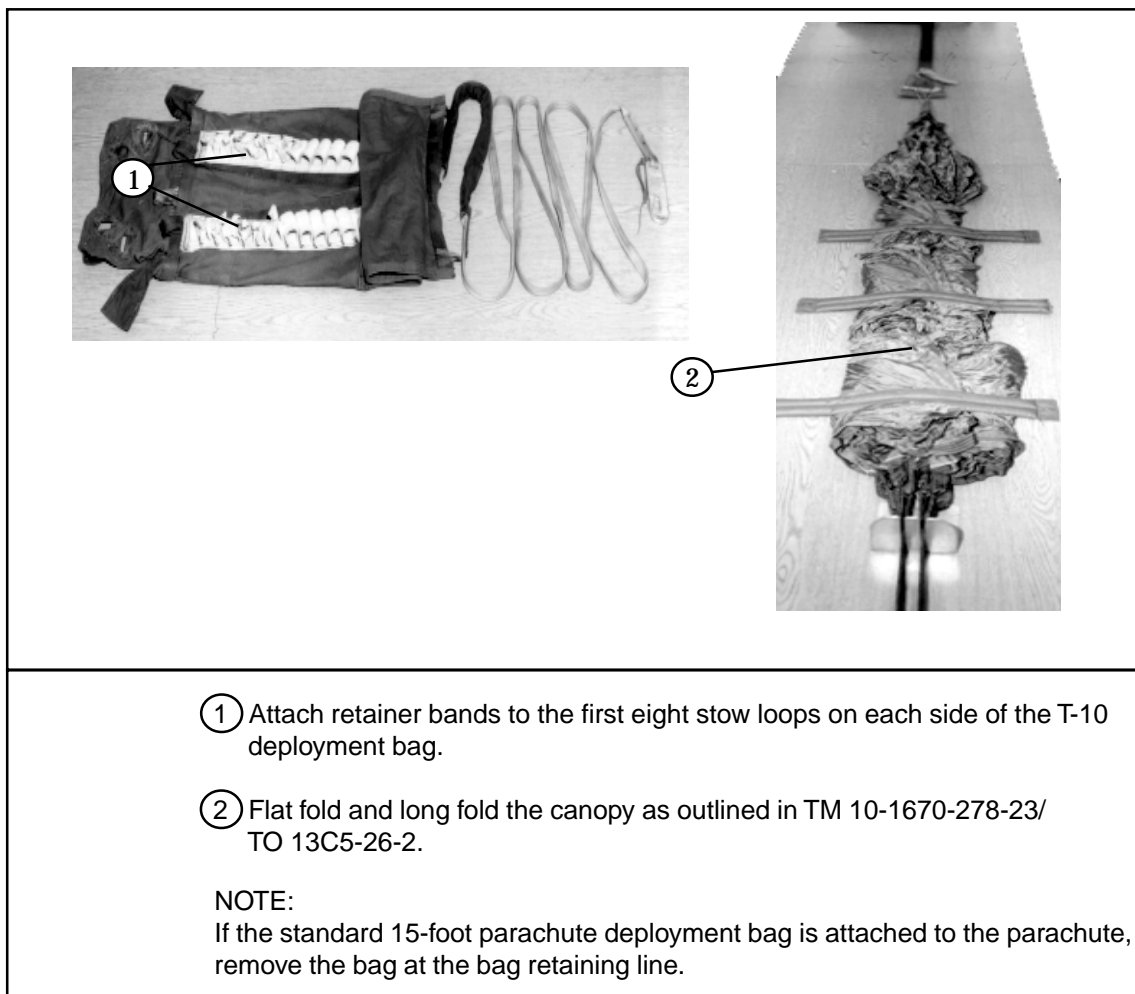


Figure 3-12. Retainer Bands Attached and Canopy Folded

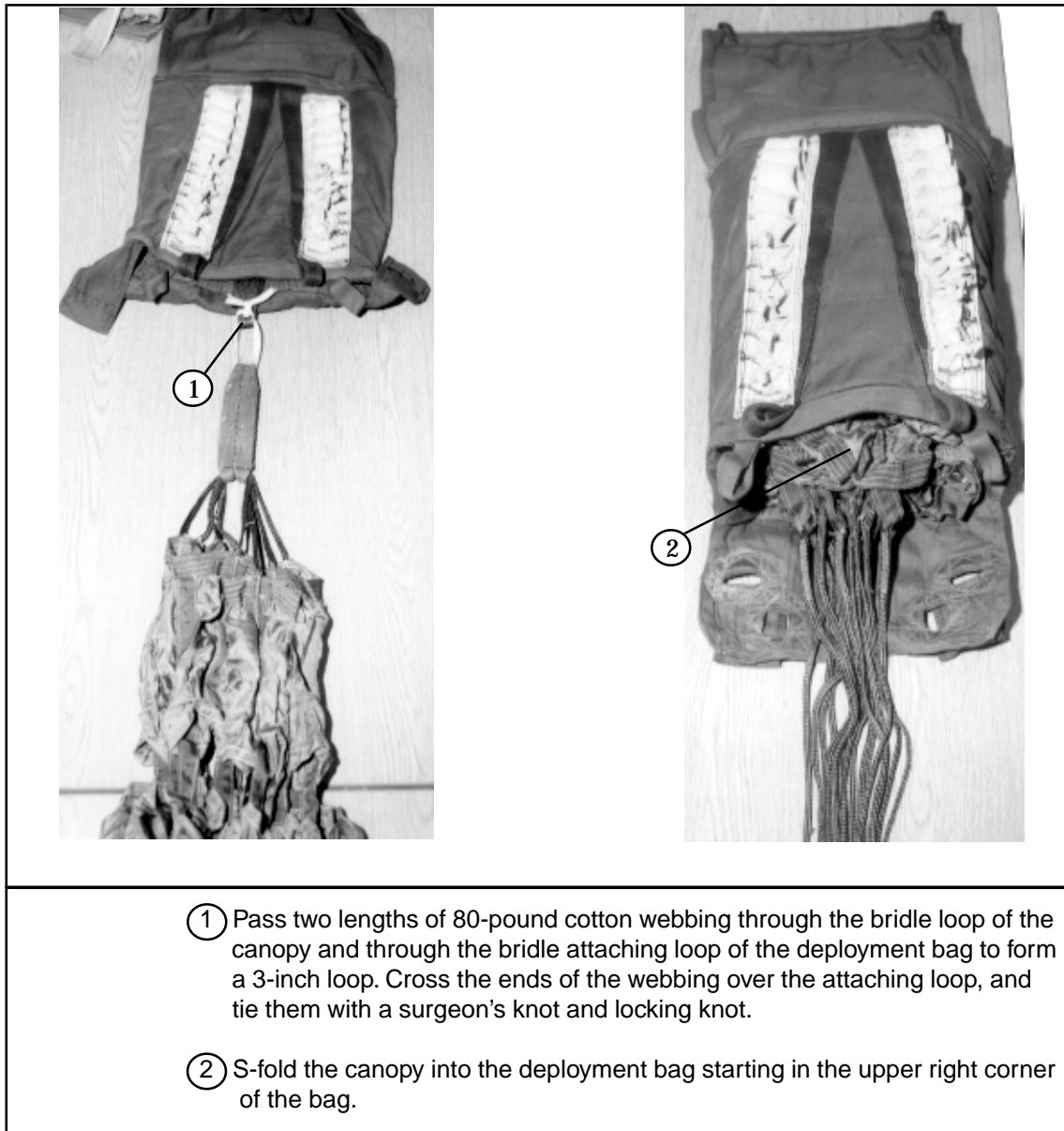
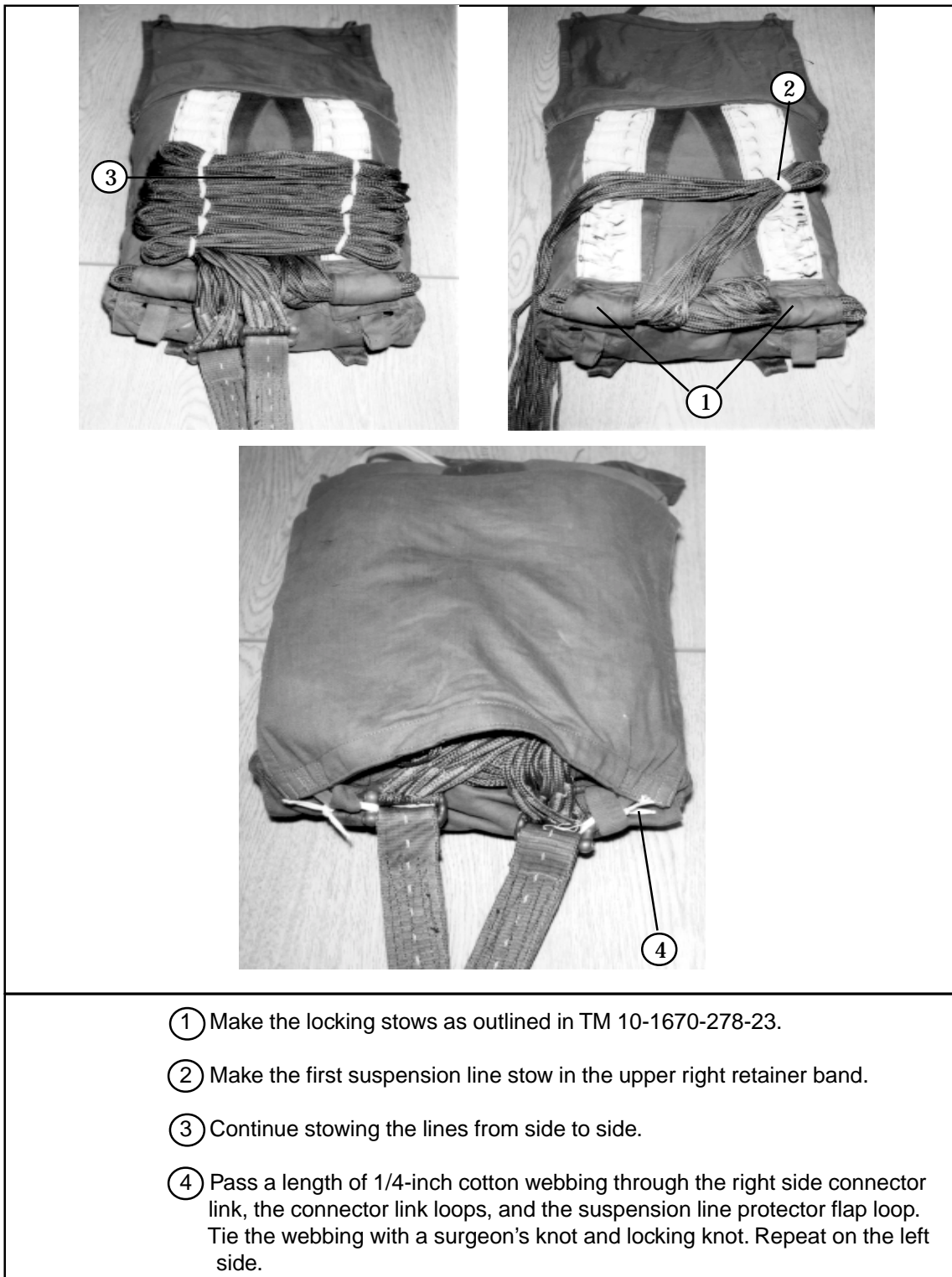
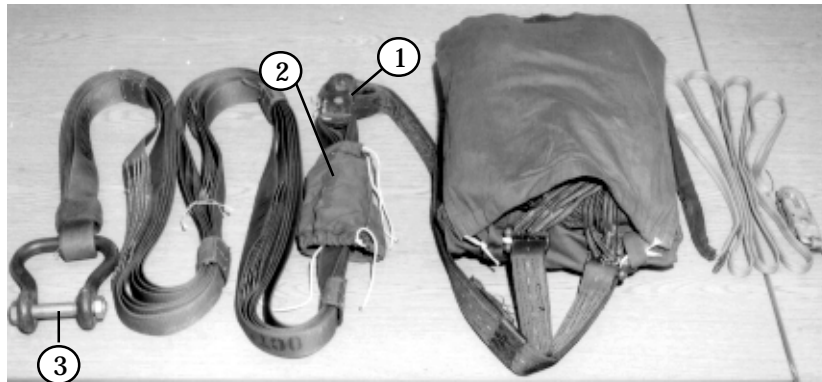


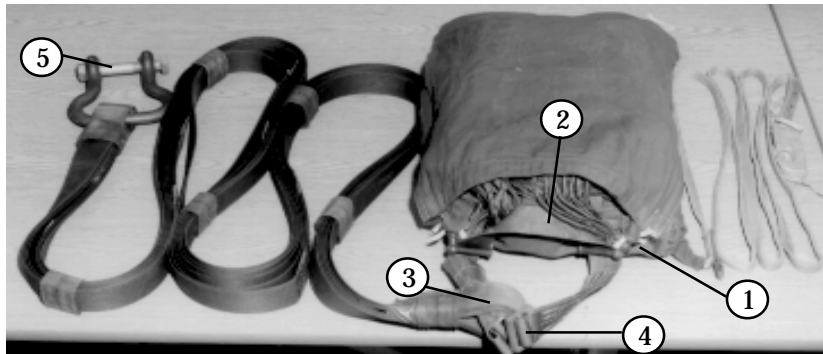
Figure 3-13. Deployment Bag Attached and Canopy Stowed





- ① Attach a type IV link assembly or medium clevis to the 36-inch adapter web.
- ② Attach a 9-foot (2-loop), type XXVI, nylon webbing sling to the type IV link or medium clevis.
- ③ Bolt a medium suspension clevis (shown) or a type IV link assembly to the free end of the sling.

Figure 3-15. Deployment Line Installed on a 36-inch Adapter Web

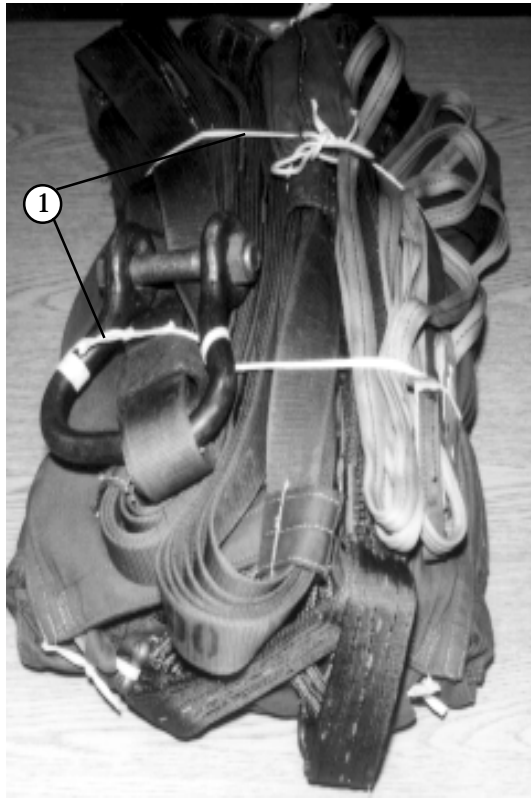


- ① Secure the parachute connector links as shown in step 4.
- ② Run one end of a 60-inch shear strap through both of the parachute connector links.
- ③ Run one end of the 60-inch shear strap through one end of a 12-foot (3-loop), type X, nylon sling.
- ④ Fasten the friction adapter, and adjust the shear strap to form a 12-inch loop. Tape the excess strap.
- ⑤ Bolt a medium suspension clevis (shown) or a type IV link assembly to the free end of the sling.

NOTE:

The above procedures are for a 15-foot cargo extraction parachute without a 36-inch adapter web.

Figure 3-16. Deployment Line Installed on a 60-inch Adapter Web



- ① S-fold the deployment line and static line. Place them on top of the deployment bag. Secure them in place with two lengths of 1/4-inch cotton webbing wrapped around the lines and bag.

Figure 3-17. Cargo Extraction Parachute Packed in a T-10 Deployment Bag

PREPARING AND STOWING A G-12 CARGO PARACHUTE AND THE 15-FOOT CARGO EXTRACTION

3-9. Prepare a G-12 cargo parachute. Stow it and the 15-foot cargo extraction parachute on the load as shown in Figure 3-18.

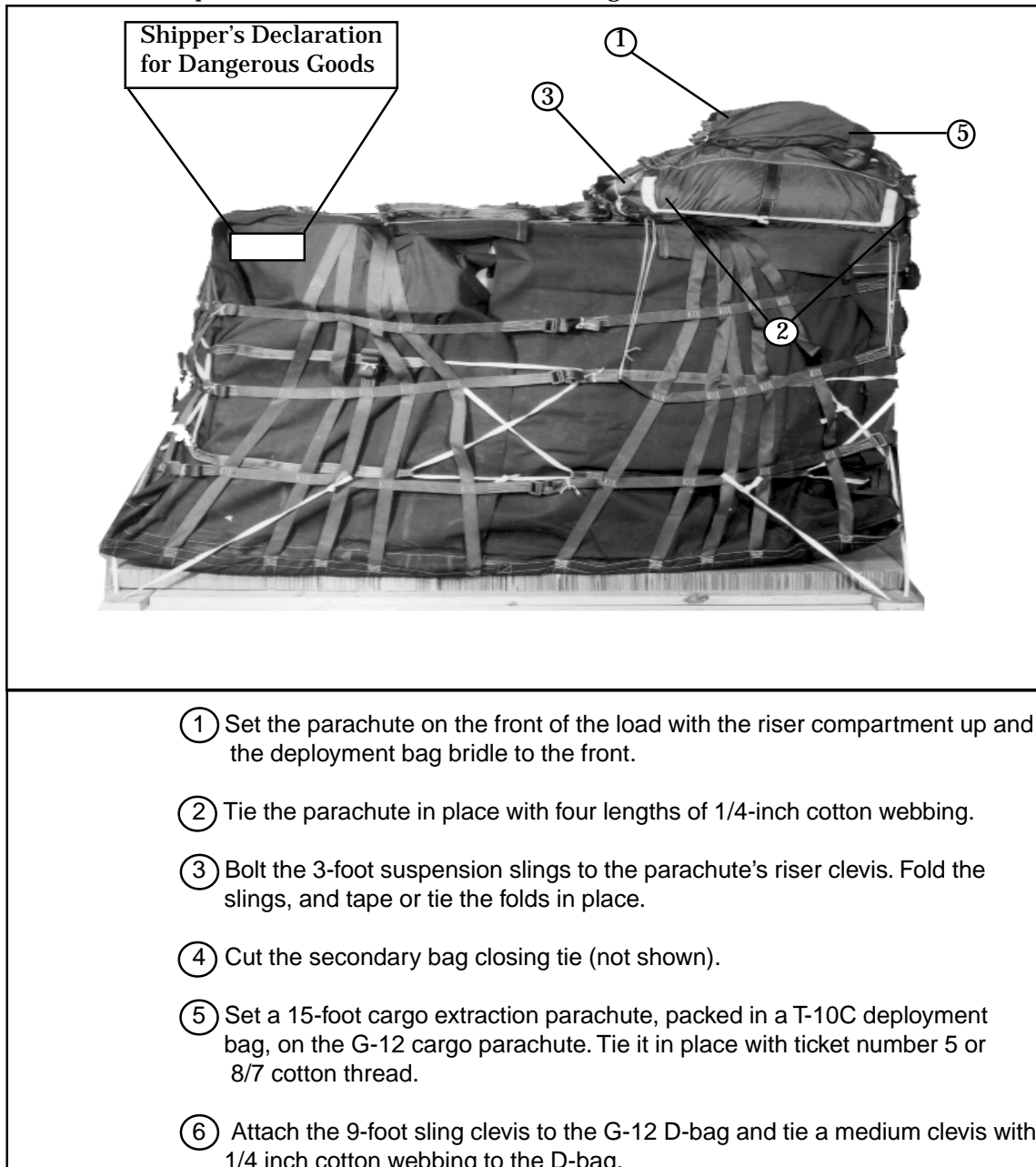


Figure 3-18. Parachutes Stowed on Motorcycles Rigged for a Low-Velocity Airdrop

MARKING RIGGED LOAD

3-10. Complete Shipper's Declaration for Dangerous Goods and securely attach it to the load as shown in Figure 3-19. Indicate on the form that the fuel tank has been prepared in accordance with AFJMAN 24-204/TM 38-250. If the load varies, the weight, height, and parachute requirements must be recomputed.

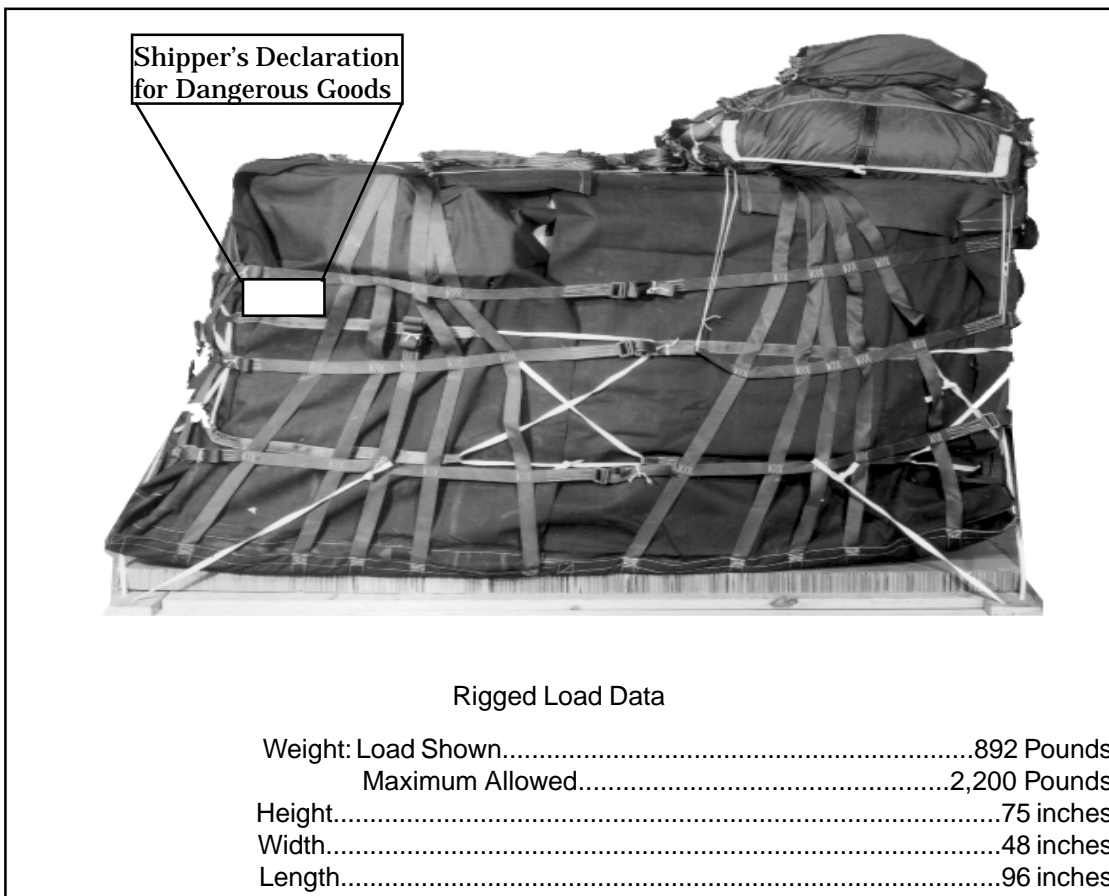


Figure 3-19. Motorcycles Rigged for Low-Velocity Airdrop

EQUIPMENT REQUIRED

3-9. The equipment needed to prepare and rig this load is listed in Table 3-1.

Table 3-1. Equipment Required for Rigging Two Motorcycles for Low-Velocity Airdrop

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive, paste, 1-gal	as required
1670-00-587-3421	A-22 cargo bags	2
1670-01-248-9502	*Bag, deployment, personnel parachute, T-10C	1
1670-00-568-0323	*Band, rubber, retainer parachute	as required
4030-00-678-8562	Clevis assembly, suspension, cargo medium 3/4"	4
4020-00-240-2146	Cord, nylon, type III, 550-lb	as required
1670-00-783-5988	*Link assembly, type IV	1
5510-00-220-6148	Lumber: 2- by 6- by 48-in 2- by 6- by 85-in	2 2
5315-00-010-4659	Nail, steel wire, common, 8d	as required
1670-00-753-3928	Pad, energy-dissipating honeycomb, 3- by 36- by 96-in 12- by 18-in 24- by 36-in 24- by 84-in 36- by 36-in 36- by 84-in 36- by 96-in	7 sheets (4) (3) (1) (2) (3) (2)

*These items are needed to pack the 15-foot cargo extraction parachute.

Table 3-1. Equipment Required for Rigging Two Motorcycles for Low-Velocity Airdrop (cont)

National Stock Number	Item	Quantity
1670-01-065-3755	Parachute: Cargo, G-12E	1
1670-01-063-3715	*Cargo, extraction, 15-ft	1
5530-00-128-4981	Plywood, 3/4- by 48- by 96-in	2
	Sling, cargo, airdrop, type XXVI, nylon webbing:	
1670-01-062-6301	3-ft (2-loop)	2
1670-01-062-6304	*9-ft (2-loop)(deployment line)	1
1670-00-998-0117	Static line, cargo parachute, breakaway-type	1
7510-00-266-5016	Tape, adhesive, 2-in	as required
8310-00-917-3945	Thread, cotton, ticket Number 5	as required
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch	as required
8305-00-268-2453	Nylon, tubular, 1/2-in, 1,000-lb	as required
8305-00-263-3591	Nylon, type VIII	as required

*These items are needed to pack the 15-foot cargo extraction parachute.

Chapter 4

Rigging Quad-Runners For Low-Velocity Airdrop

SECTION I

RIGGING ONE FOUR WHEELED QUAD-RUNNER FOR LOW-VELOCITY AIRDROP

DESCRIPTION OF LOAD

4-1. The four wheeled quad-runner (QUAD) is rigged on a 48-by 87-inch Combat Expendable Platform (CEP) with one G-12E cargo parachute. The load is rigged for a low velocity airdrop over the ramp of a C-130, C-141, or C-17 aircraft. The QUAD is 45 inches wide, 65 inches high, 72 inches long and weighs 550 pounds and is shown in *Figure 4-1*.

BUILDING AND PREPARING COMBAT-EXPENDABLE PLATFORM

4-2. Build and prepare the 48- by 87-inch CEP as shown in *Figure 4-2*.



Figure 4-1. Four Wheeled Quad-Runner (QUAD)

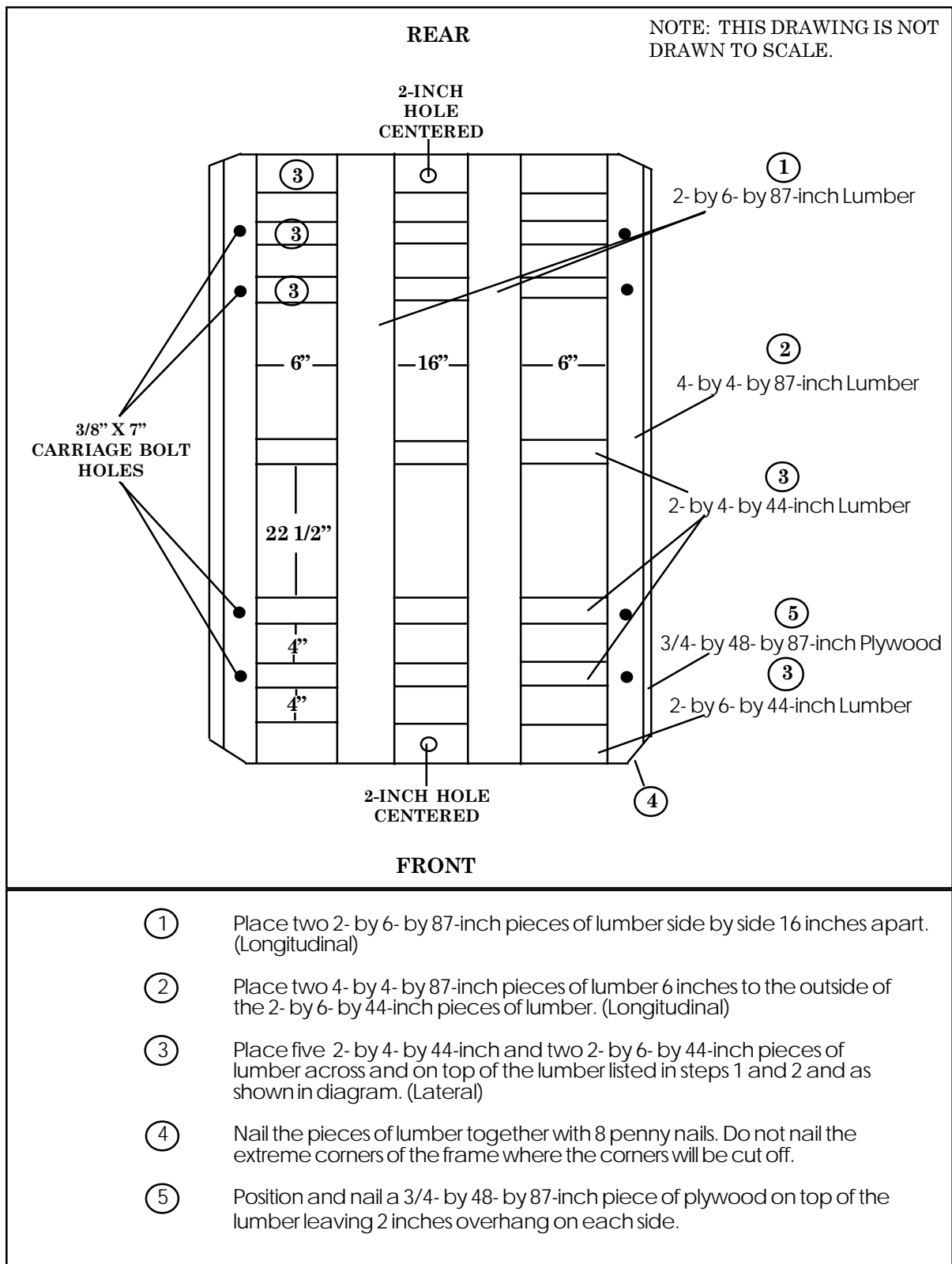
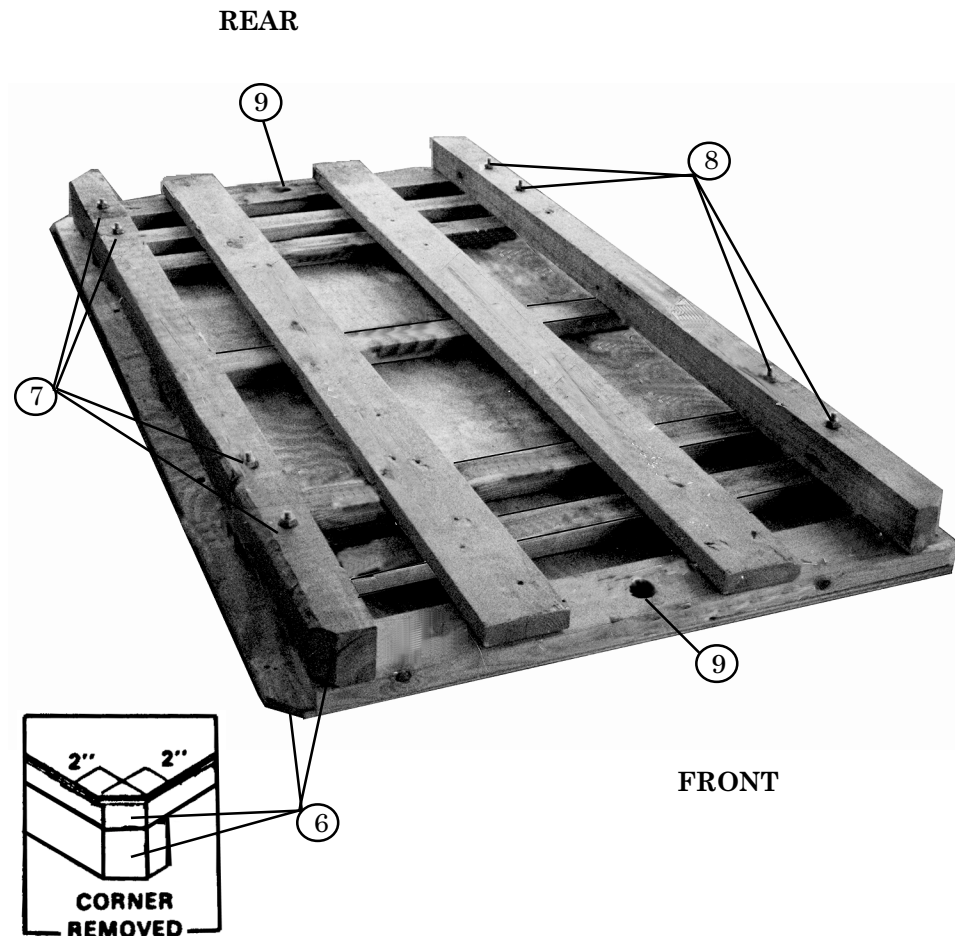


Figure 4-2. Platform Prepared



- ⑥ Cut the four corners of the plywood and 4- by 4- by 87-inch pieces of lumber at 45 degree angles (2- by 2-inch).
 - ⑦ Drill eight 3/8-inch holes at the suspension sling points as shown. Ensure the holes pass through the plywood and each end of each 2- by 4- by 44-inch lateral stringer and the 4- by 4- by 87-inch longitudinal stringers.
 - ⑧ Insert a 3/8- by 7-inch carriage bolt into each hole, and bolt each of the lateral stringers to the longitudinal stringers.
- Note: Insert bolts from plywood deck side of platform and countersink carriage bolts head.**
- ⑨ Drill one 2 inch hole centered on 2-by 6-by 44-inch piece of lumber and plywood at each end of the platform.

Figure 4-2. Platform Prepared (Continued)

INSTALLING SUSPENSION SLINGS

- 4-3. Mark the center of two 20-foot, 2-loop suspension slings with tape. Route the slings through the suspension points of the platform with the tape at the center of the platform. Secure the slings to the platform as shown in *Figure 4-3*.

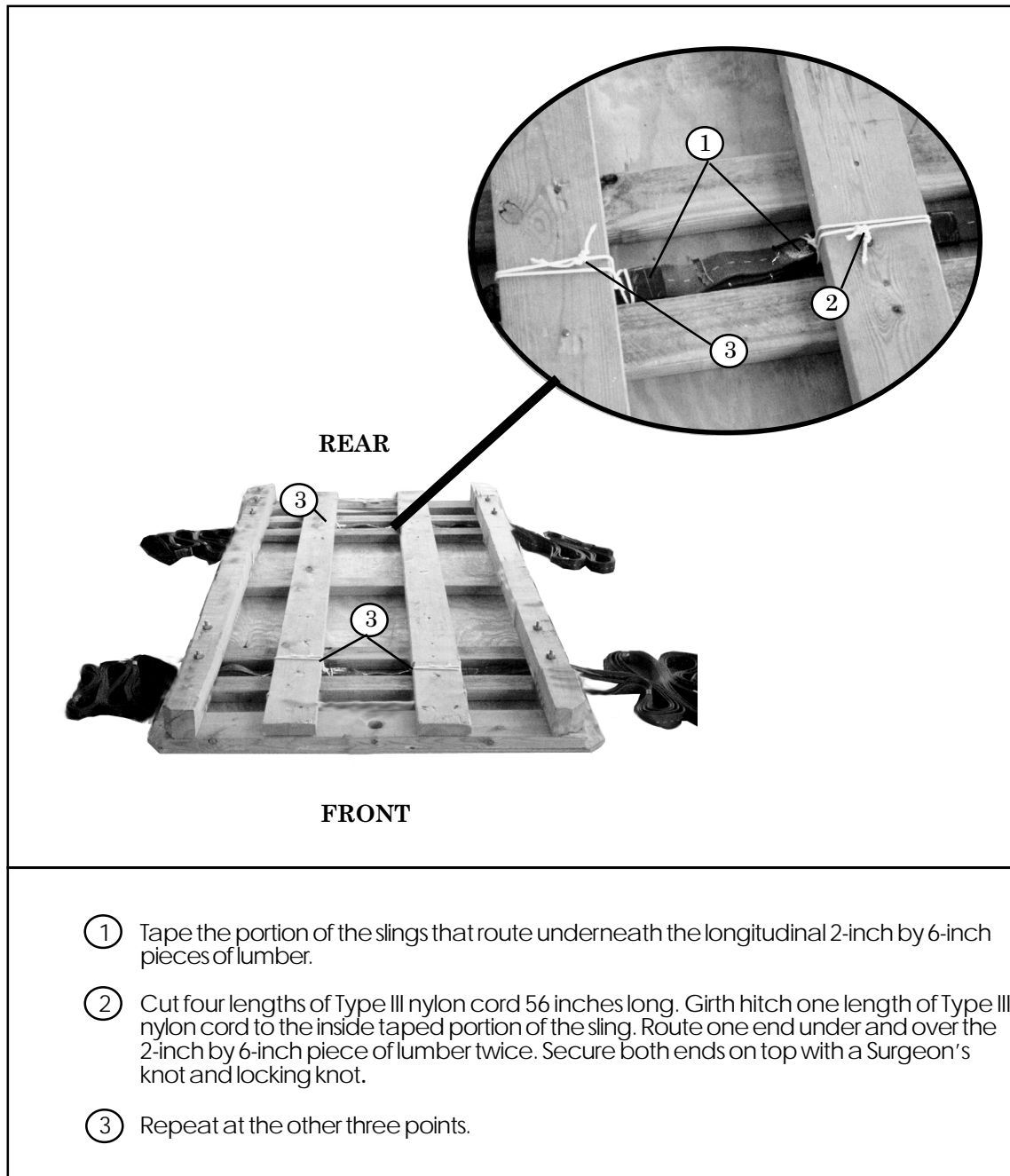


Figure 4-3. Suspension Slings Secured to Platform

INSTALLING LOAD RESTRAINTS

4-4. Install the load restraints as shown in *Figure 4-4*.

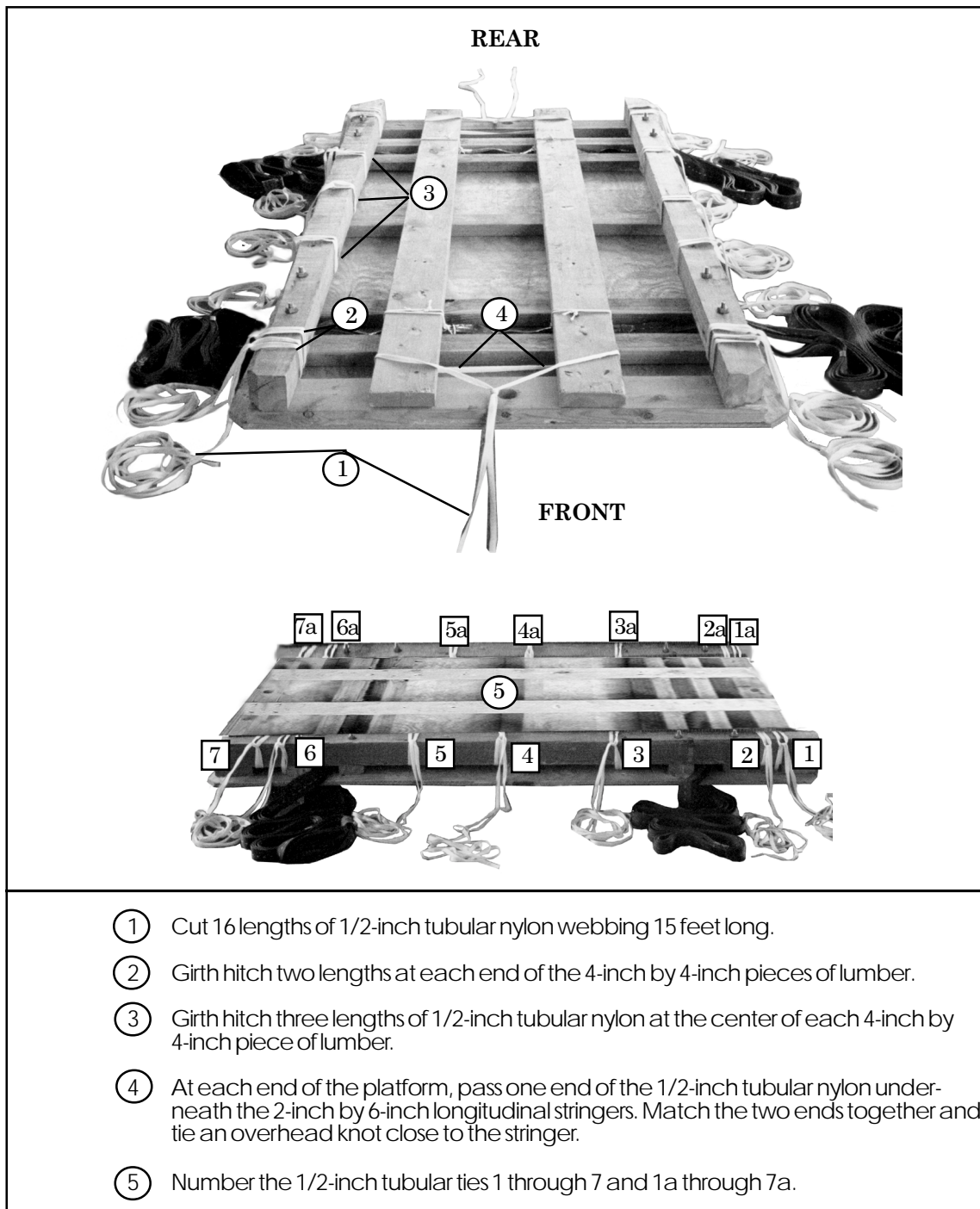
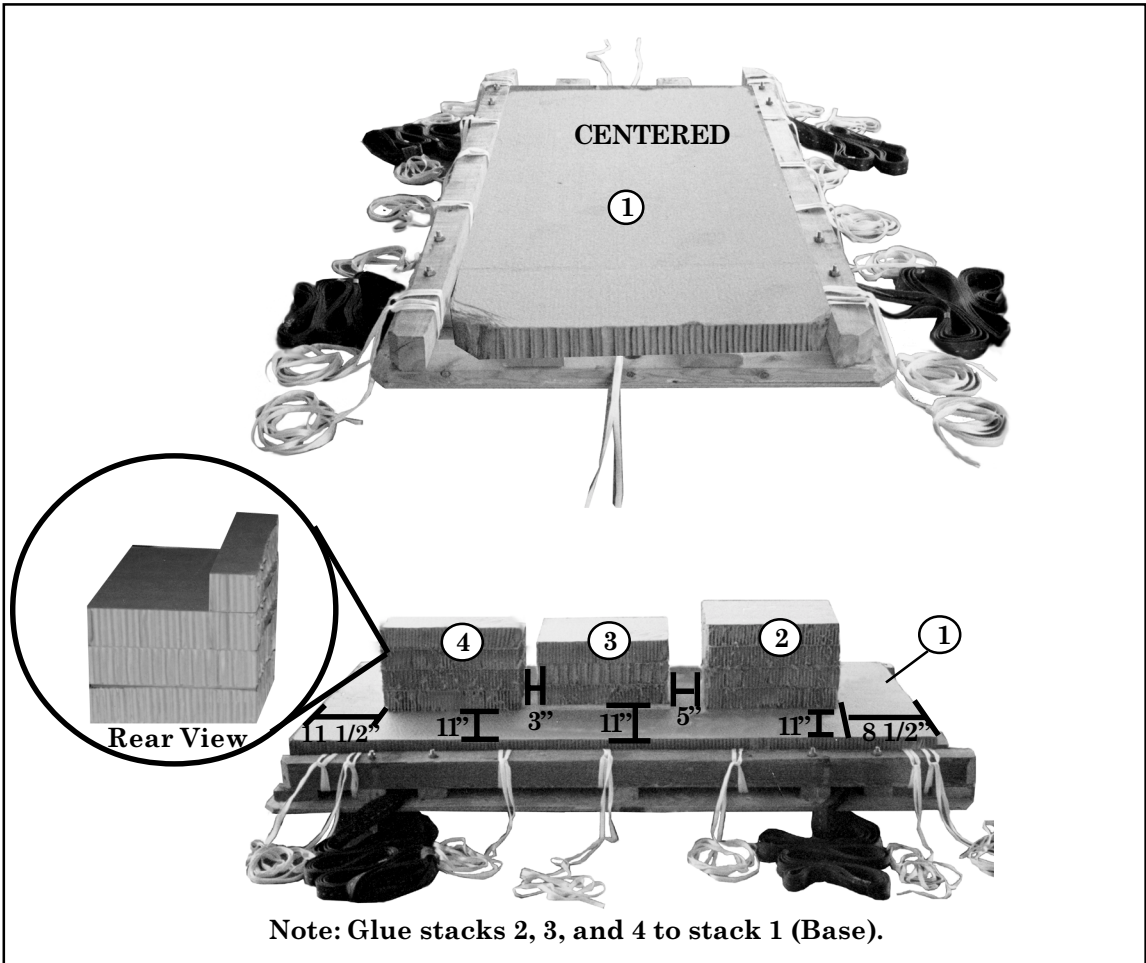


Figure 4-4. Load Restraints Secured to Platform

POSITIONING HONEYCOMB STACKS

4-5. Prepare and position the honeycomb stacks as shown in *Figure 4-5*.



STACK NUMBER	PIECES	WIDTH	LENGTH	MATERIAL	INSTRUCTIONS
1	1	36	82	Honeycomb	See Figure 4-5.
2	4	14	18	Honeycomb	See Figure 4-5.
3	3	14	18	Honeycomb	See Figure 4-5.
	1	14	18	3/4-inch Plywood	Glue to bottom of stack 3.
4	3	14	18	Honeycomb	See Figure 4-5.
	1	4	18	Honeycomb	

Figure 4-5. Honeycomb Protectors Prepared and Tied to Motorcycles

PREPARING AND POSITIONING QUAD-RUNNER

4-6. Prepare and position the quad-runner as shown in *Figure 4-6*.

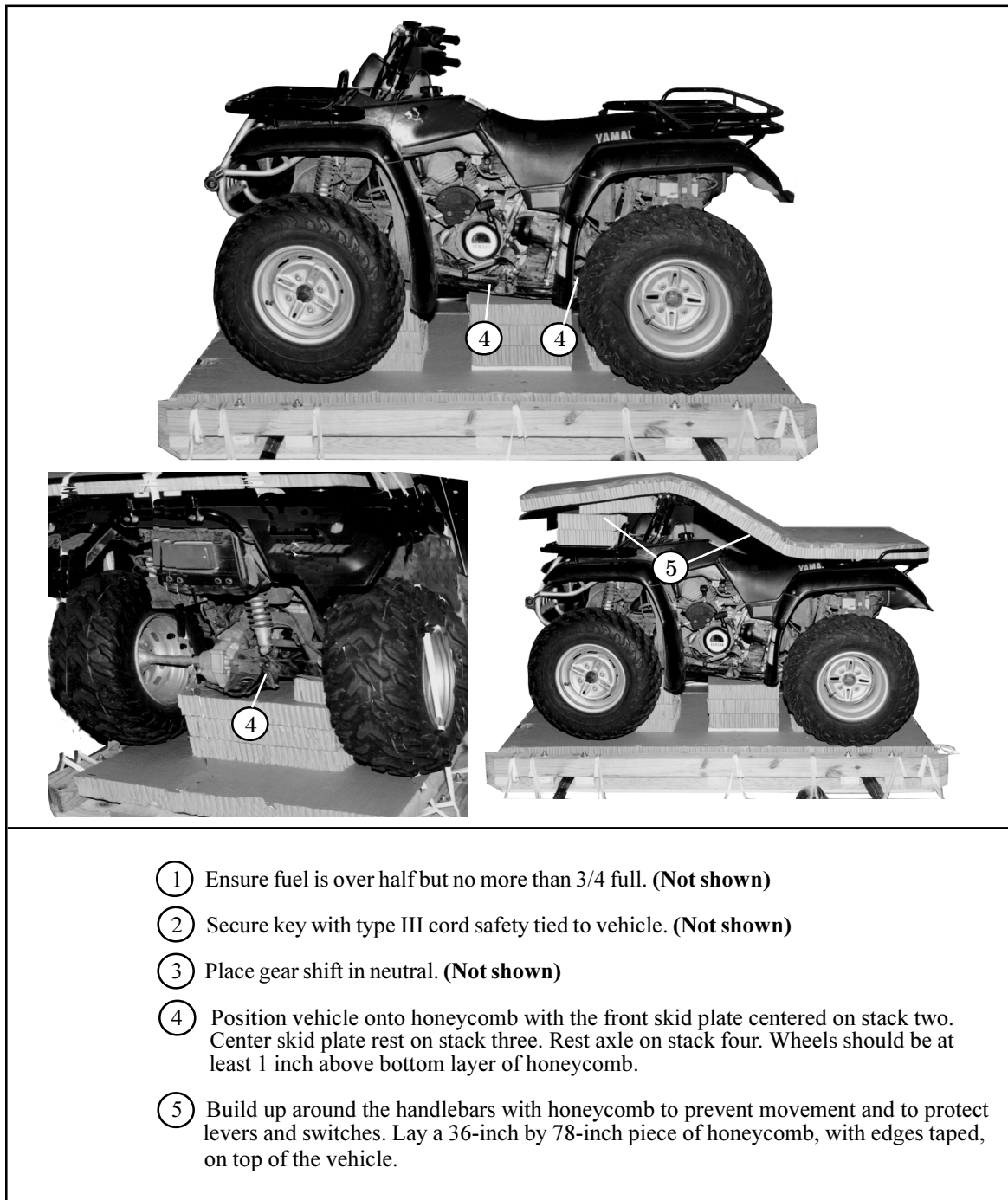
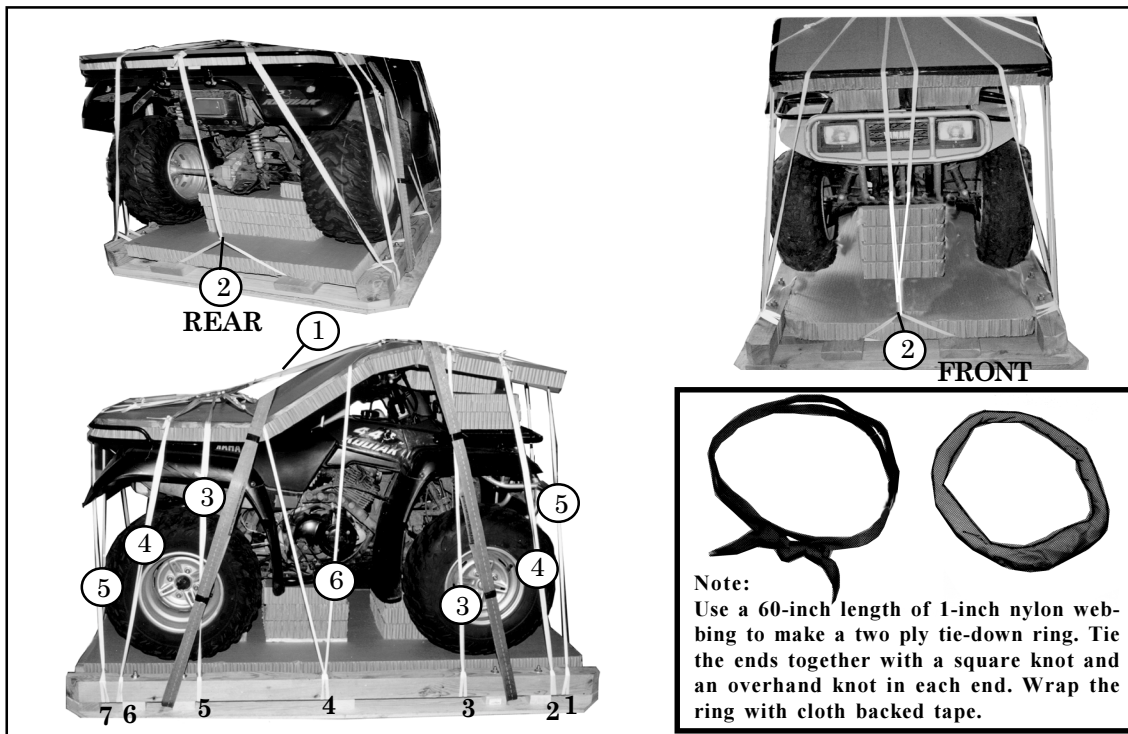


Figure 4-6. Quad-Runner Positioned

SECURING LOAD TO PLATFORM

4-7. Form and tape with cloth backed tape two tie-down rings, approximately 10 inches in diameter, with 1-inch tubular nylon webbing. (**see note**) Lay one ring on top of the honeycomb over the handlebars and the other ring over the seat. Secure the load to the platform as shown in *Figure 4-7*.



- ① Tie the rings together with a 40 inch length of 1/2-inch tubular nylon webbing to keep them centered.
- ② Tie the front and rear restraints of each end to the respective tie-down ring with a trucker's hitch knot.
- ③ Tie numbers 5 and 5a and 3 and 3a to the respective tie-down ring.
- ④ Tie numbers 6 and 6a and 2 and 2a to the respective tie-down ring.
- ⑤ Route numbers 7 and 7a and 1 and 1a around each end of the vehicle and up to the tie-down rings.
- ⑥ Using numbers 4 and 4a, split the tie and then tie one end to one tie-down ring and the other end to the other tie-down ring.

Figure 4-7. Quad-Runner Positioned

SECURING ACCOMPANYING LOAD

4-8. Whenever possible, the load should be kept balanced. One rucksack and one water or fuel can may be used to keep the load balanced as shown in *Figure 4-8*.

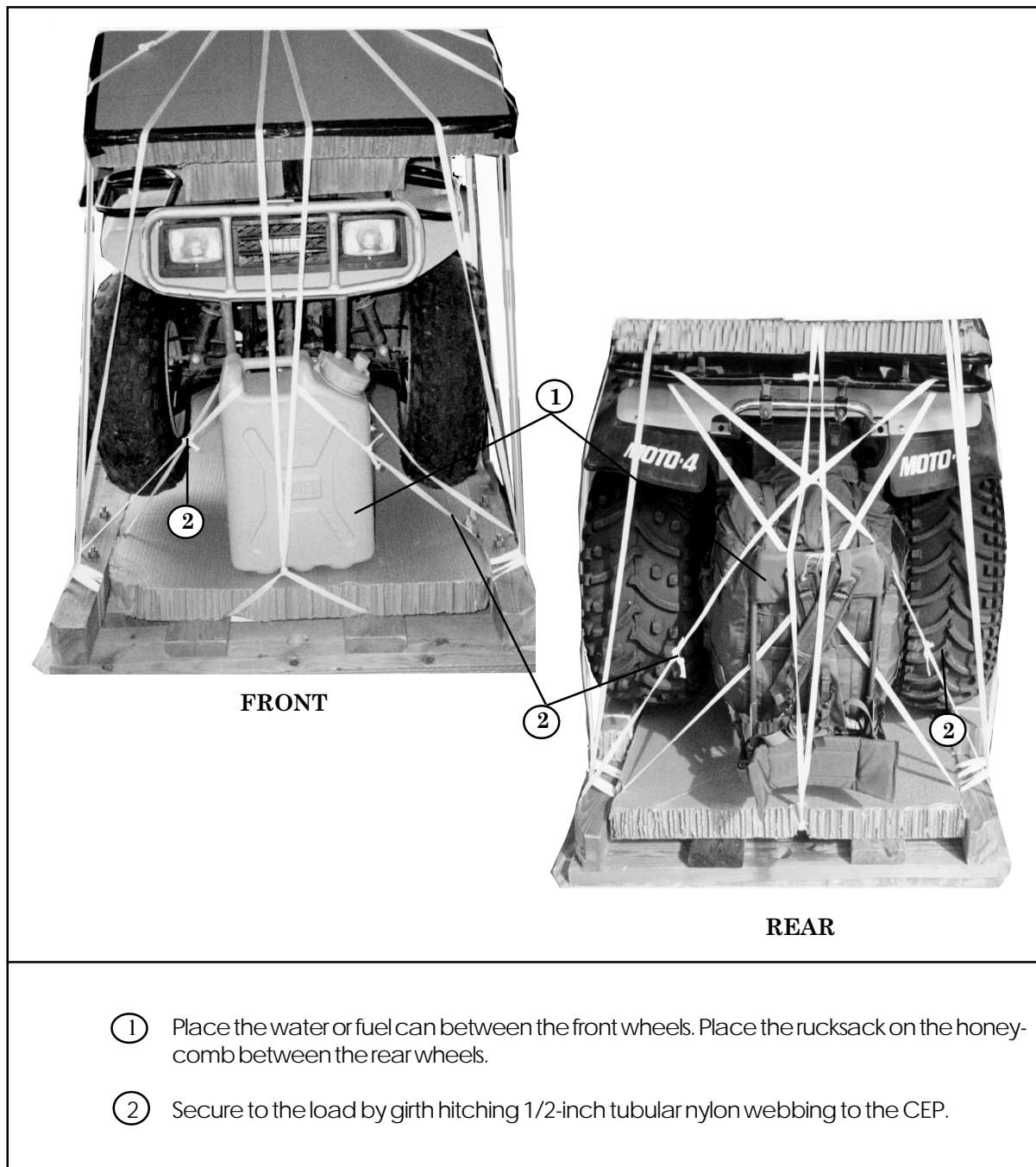


Figure 4-8. Accompanying Load Secured

SAFETYING SUSPENSION SLINGS

4-9. Lift and safety the suspension slings using a deadman's tie according to *FM 10-500-2/TO 13C7-1-5* and as shown in *Figure 4-9*.

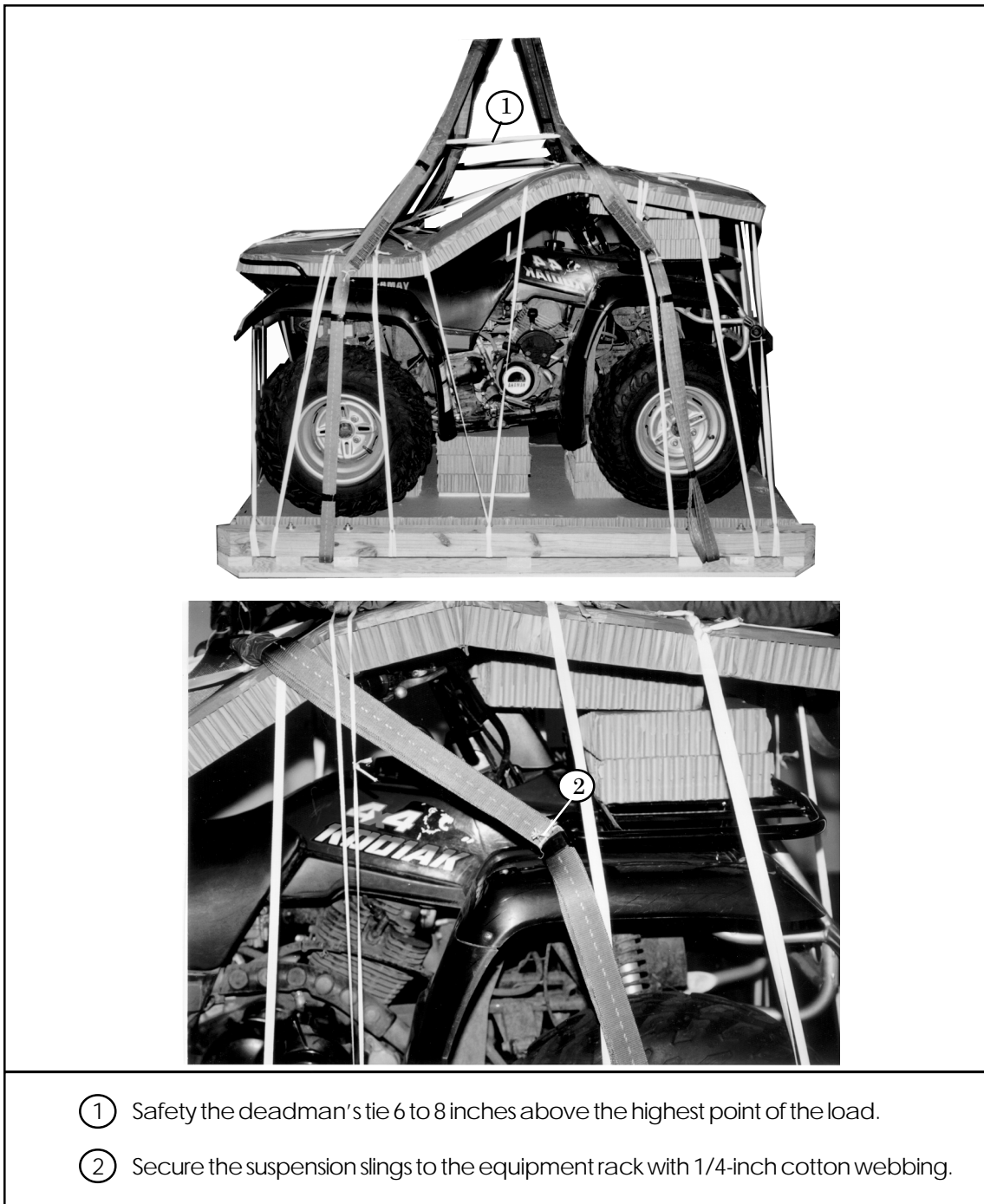


Figure 4-9. Suspension Slings Safetied

STOWING CARGO PARACHUTE

4-10. Stow one G-12E cargo parachute as shown in *Figure 4-10*. Prepare and pack a 15-foot cargo extraction parachute as described in *Chapter 3, Paragraph 3-8*.

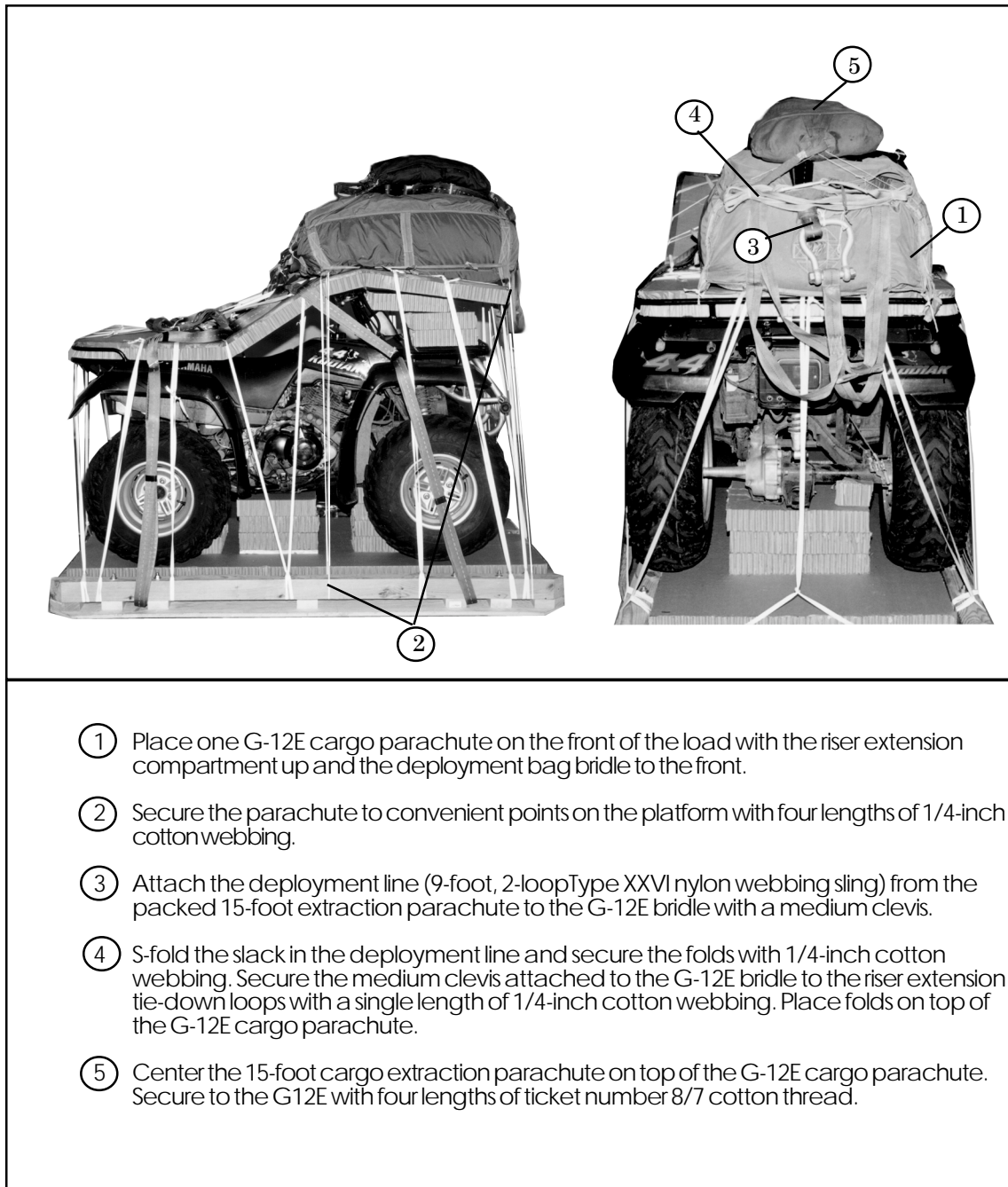
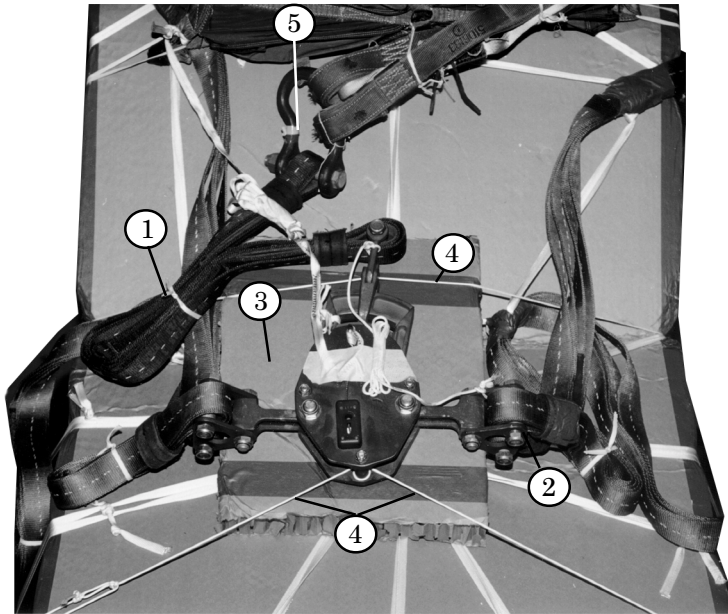


Figure 4-10. Parachute Stowed

INSTALLING PARACHUTE RELEASE

4-11. Prepare, install, and safety the M-1 release according to *FM 10-500-2/TO 13C7-1-5* and as shown in *Figure 4-11*.



- ① Connect a 3-foot, 2-loop Type XXVI sling to the G-12E parachute riser clevis. Connect the other end of the sling to the parachute connector on the M-1 release. Fold and tie with 1/4-inch cotton webbing.
- ② Connect the suspension slings to the M-1 release.
- ③ Cut and place a 14- by 14- inch piece of honeycomb on top of the load under the release.
- ④ Secure the M-1 release to the platform with Type III nylon cord.
- ⑤ Remove the left secondary bag closing tie from the G-12E parachute.

Figure 4-11. M-1 Parachute Release Installed

MARKING RIGGED LOAD

4-12. Mark the rigged load according to *FM 10-500-2/TO 13C7-1-5* and as shown in *Figure 4-12*. If the accompanying load varies from the one shown, the weight, height, and CB must be recomputed. Complete the Shipper's Declaration for Dangerous Goods.



RIGGER LOAD DATA

Weight: Load Shown	960 pounds
Maximum Load Allowed	1200 pounds
Height	68 inches
Length	87 inches
Width	48 inches

Figure 4-12. Four Wheeled Quad-Runner Rigged on CEP for Low-velocity Airdrop

EQUIPMENT REQUIRED

4-13. The equipment needed to prepare and rig this load is listed in *Table 4-1*.

Table 4-1. Equipment Required for Rigging Quad-Runner for Low-Velocity Airdrop

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
1670-00-590-9909	*Bag, deployment, personnel parachute (T10)	1
1670-00-568-0323	*Band, rubber, retainer	As required
No NSN	Bolt, carriage, 3/8-inch diameter, 7-inch long, w/washer and nut	8
4030-00-678-8562	Clevis, assembly, suspension, cargo (Medium)	2
4020-00-240-2146	Cord, nylon, Type III, 550-lb	As required
5510-00-220-6446	Lumber: 2- by 4- by 44-inch	5
5510-00-220-6148	2- by 6- by 87-inch	2
	2- by 6- by 44-inch	2
5510-00-220-6274	4- by 4- by 87-inch	2
5315-00-010-4659	Nail, steel wire, common, 8d	As required
1670-00-753-3928	Pad, energy-dissipating honeycomb, 3- by 36- by 96-inch	5
	36- by 82-inch	(2)
	36- by 78-inch	(1)
	14- by 18-inch	(10)
	Parachute:	
1670-01-065-3755	Cargo, G-12E	1
1670-01-063-3715	*Cargo, extraction, 15-foot	1
5530-00-128-4981	Plywood:	
	3/4- by 48- by 87-inch	1
	14- by 18-inch	1
	Sling, cargo, airdrop, Type XXVI, nylon webbing:	
1670-01-062-6301	3-foot (2-loop)	1
1670-01-062-6304	*9-foot (2-loop)	1
1670-01-062-6302	20-foot (2-loop)	2

***These items are needed to pack the 15-foot cargo extraction parachute.**

Table 4-1. Equipment Required for Rigging Quad-Runner for Low-Velocity Airdrop
(Continued)

National Stock Number	Item	Quantity
1670-01-097-8816	Release, cargo parachute, M-1	1
8310-00-917-3945	Thread, cotton, number 8/7 cord	As required
7510-00-266-5016	Tape, adhesive, 2-inch (Cloth back)	As required
	Webbing:	
8305-00-268-2411	Cotton, Type I, 1/4-inch	As required
8305-00-268-2453	Nylon, tubular, 1/2-inch, 1,000-lb	As required
8305-00-268-2455	Nylon, tubular, 1-inch	As required
8305-00-263-3591	Nylon, type VIII	As required

SECTION I I

RIGGING ONE FOUR WHEELED QUAD-RUNNER IN A DOUBLE A-22 CONTAINER

DESCRIPTION OF LOAD

4-14. The four wheeled quad-runner (QUAD) may also be rigged in a double A-22 container. The load is rigged on a 48-by 96-inch Combat Expendable Platform (CEP) with one G12-E cargo parachute. The load is rigged for a low velocity air-drop, using over the ramp or the Centerline Vertical Restraint system (CVR) from a C-130, C-141, or C-17 aircraft.

BUILDING AND PREPARING COMBAT-EXPENDABLE PLATFORM

4-15. Build and prepare the CEP as shown in *Paragraph 3-2, Pages 3-1 through 3-12*.

POSITIONING AND JOINING A-22 SLING ASSEMBLY

4-16. Position and join A-22 sling assembly as shown in *Paragraph 3-3, Page 3-3*.

POSITIONING A-22 CARGO COVERS

4-17. Position A-22 cargo cover as described in *Paragraph 3-4, Page 3-5*.
(Use steps 1 and 2 only)

PREPARING AND POSITIONING HONEYCOMB

4-18. Prepare and position honeycomb as shown in *Paragraph 4-5, Page 4-6*.

Note: Stack number 1 dimensions are 36- by 96-inches for a quad rigged in an A-22 container.

PREPARING, POSITIONING AND PROTECTING QUAD

4-19. Prepare, position, and protect quad as shown in *Paragraph 4-6, Page 4-7*. **Note: Place a 36 by 82-inch piece of honeycomb on each side of the quad and secure with type III nylon cord.**

CLOSING CARGO BAGS

4-20. Close cargo bags as shown in *Paragraph 3-6, Page 3-8*.

ATTACHING SUSPENSION SLINGS

4-21. Attach suspension slings as shown in *Paragraph 3-7, Page 3-12*.

PACKING A 15-FOOT CARGO EXTRACTION PARACHUTE

4-22. Pack a 15-foot cargo extraction parachute as shown in *Paragraph 3-8, Page 3-13*.

PREPARING AND STOWING G-12E CARGO PARACHUTE AND 15-FOOT CARGO EXTRACTION PARACHUTE

4-23. Prepare and stow the G-12E cargo and 15-foot cargo extraction parachutes as described in *Paragraph 3-9, Page 3-19*.

EQUIPMENT REQUIRED

4-24. The equipment needed to prepare and rig this load is listed in Table 4-2.

Table 4-2. Equipment Required for Rigging Quad-Runner in an A-22 Container

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
1670-00-587-3421	A-22 cargo bag	2
1670-00-568-0323	*Band, rubber, retainer	As required
4030-00-678-8562	Clevis, assembly, suspension, cargo	4
4020-00-240-2146	Cord, nylon, Type III, 550-lb	As required
	Lumber:	
5510-00-220-6148	2- by 6- by 42-inch	2
	2- by 6- by 85-inch	2
5315-00-010-4659	Nail, steel wire, common, 8d	As required
	Parachute:	
1670-01-065-3755	Cargo, G-12E	1
1670-01-063-3715	*Cargo, extraction, 15-foot	1
5530-00-128-4981	Plywood:	
	3/4- by 48- by 96-inch	1
	14- by 18-inch	1
	Sling, cargo, airdrop, Type XXVI, nylon webbing:	
1670-01-062-6301	3-foot (2-loop)	2
1670-01-062-6304	*9-foot (2-loop)	1
7510-00-266-5016	Tape, adhesive, 2-inch (Cloth back)	As required
8310-00-917-3945	Thread, cotton, number 8/7 cord	As required
	Webbing:	
8305-00-268-2411	Cotton, Type I, 1/4-inch	As required
8530-00-268-2453	Nylon, tubular, 1/2-inch, 1,000-lb	As required
8530-00-263-3591	Nylon, type VIII	As required

***These items are needed to pack the 15-foot cargo extraction parachute.**

GLOSSARY

AD	airdrop
AFB	Air Force base
AFJMAN	Air Force Joint Manual
AFJI	Air Force Joint instruction
AFI	Air Force instruction
AFTO	Air Force technical order
ALC	Airlift Logistics Center
attn	attention
C	change
cap	capacity
CEP	combat expendable platform
CB	center of balance
chap	chapter
cc	cubic centimeter
CVR	Container Vertical Restraint System
d	penny
DA	Department of the Army
DC	District of Columbia
DD	Department of Defense
diam	diameter
fig	figure
FM	field manual
ft	foot/feet
gal	gallon
HQ	headquarters
in	inch
JAI	joint airdrop inspector
lb	pound
LV	low-velocity
MCRP	Marine Corps Reference Publication
mm	millimeter
NSN	national stock number
OVE	on-vehicular equipment
TM	technical manual
TO	technical order
TRADOC	US Army Training and Doctrine Command
US	United States
w	with
yd	yard

REFERENCES

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*AFJMAN 24-204/TM 38-250. Preparing Hazardous Materials for Military Air Shipments. 25 November 1994.

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FM 10-500-3/TO 13C7-1-11. Airdrop of Supplies and Equipment: Rigging Containers 8 December 1992.

TM 10-1670-278-23&P/TO 13C5-26-2/NAVAIR 13-1-27/TM 01109C-23&P/1. Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, Cargo Type, 15-ft Diam, Cargo Extraction. 6 November 1989.

TM 10-1670-281-23&P/TO 13C5-32-2/NAVAIR 13-1-32. Unit and Intermediate Direct Soupport (DS) Maintenance Manual (Including Repair Parts and Special Tools List) for Parachute, Cargo Type: 64 Foot Diameter, Model G-12D, (NSN 1760-00-893-2371) and Model G-12E (1670-01-065-3755). 1 October 1990.

TM 10-1670-298-20&P. Unit Maintenance Manual Including Repair Parts and Special Tools List for Container Delivery System A-7A Cargo Sling (1670-00-251-1153) A-21 Aerial Delivery Cargo Bag (1670-00-242-9173), A-22 Aerial Delivery Cargo Bag (1670-01-065-3748), Capsule, Cargo, CTU-2A (1670-01-059-5788), Strap Connector, 60-Inches Long (5340-00-738-5878), Strap Connector, 120-Inches Long (5340-00-738-5879). 15 September 1995.

AFTO Form 22. Technical Order Publication Improvement Report

DA Form 2028. Recommended Changes to Publication and Blank Forms. February 1974.

* Shipper's Declaration for Dangerous Goods. Locally procured form

*AFJMAN24-204/TM 38-250 has superseded AFR 71-4/TM 38-250 (15 January 1988). This revision reflects this change.

* Shipper's Declaration for Dangerous Goods has superseded DD Form 1387-2 (February 1982.) This revision reflects this change.

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